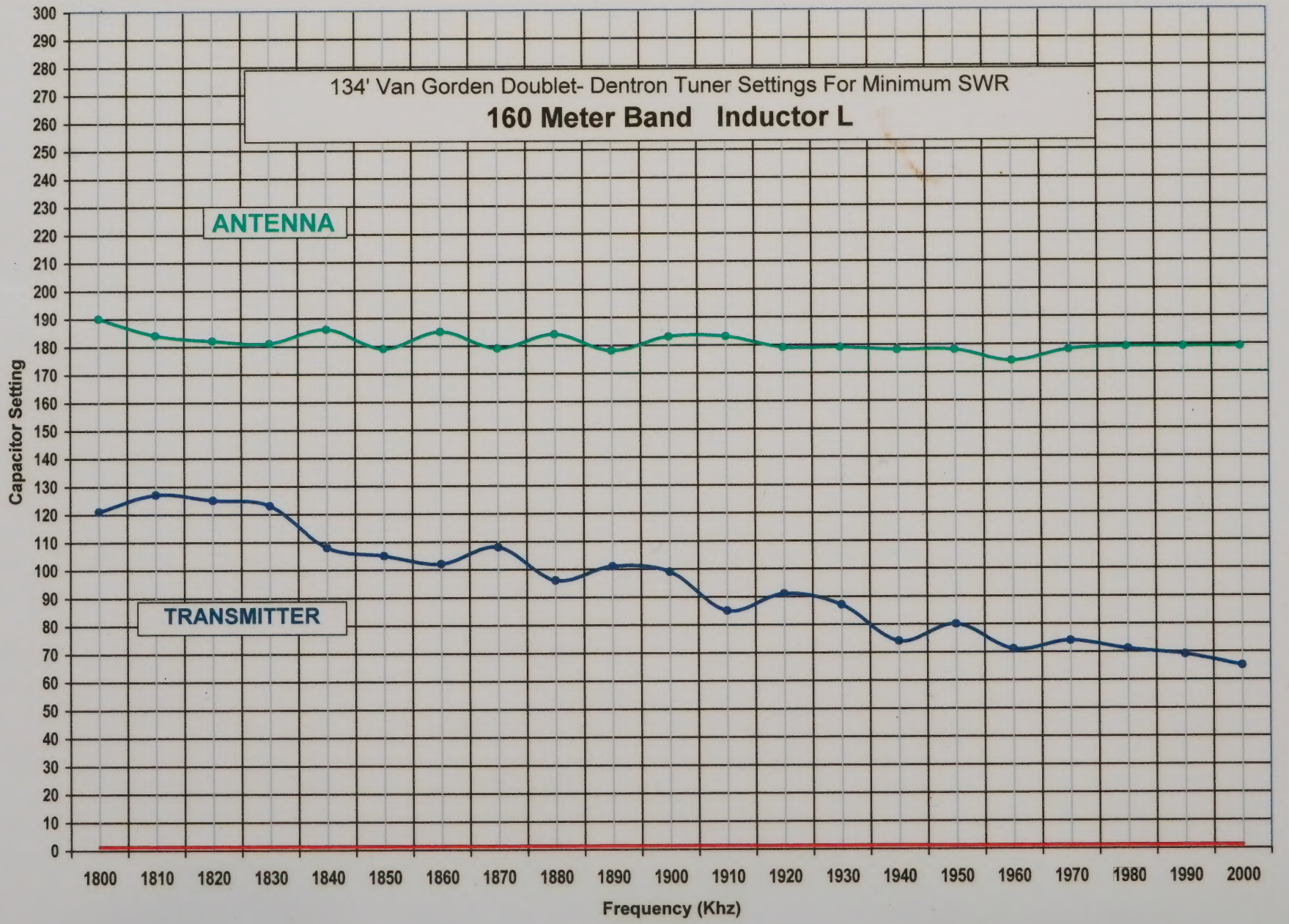
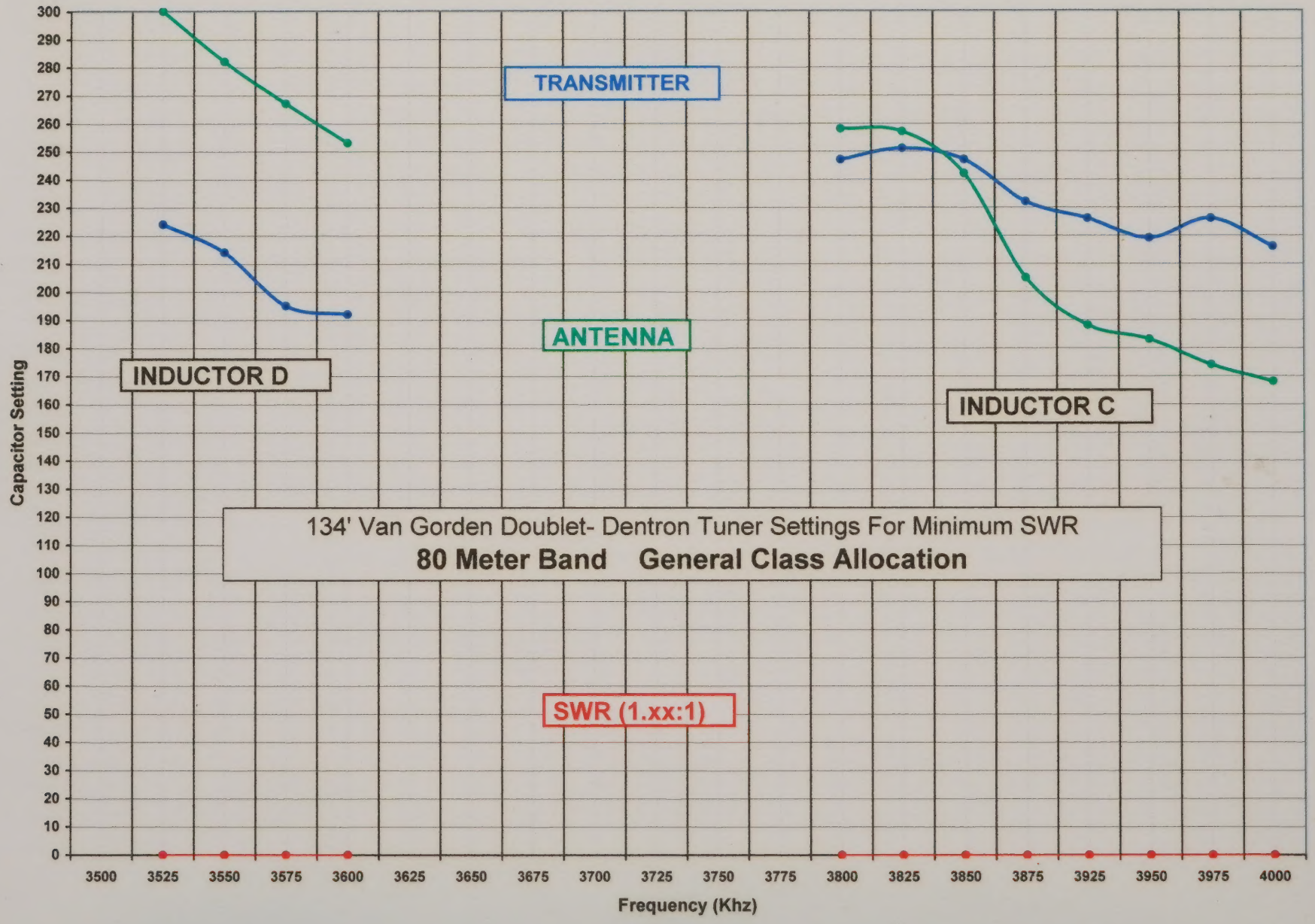
160 80 60 40 30 20 17 15 12 10

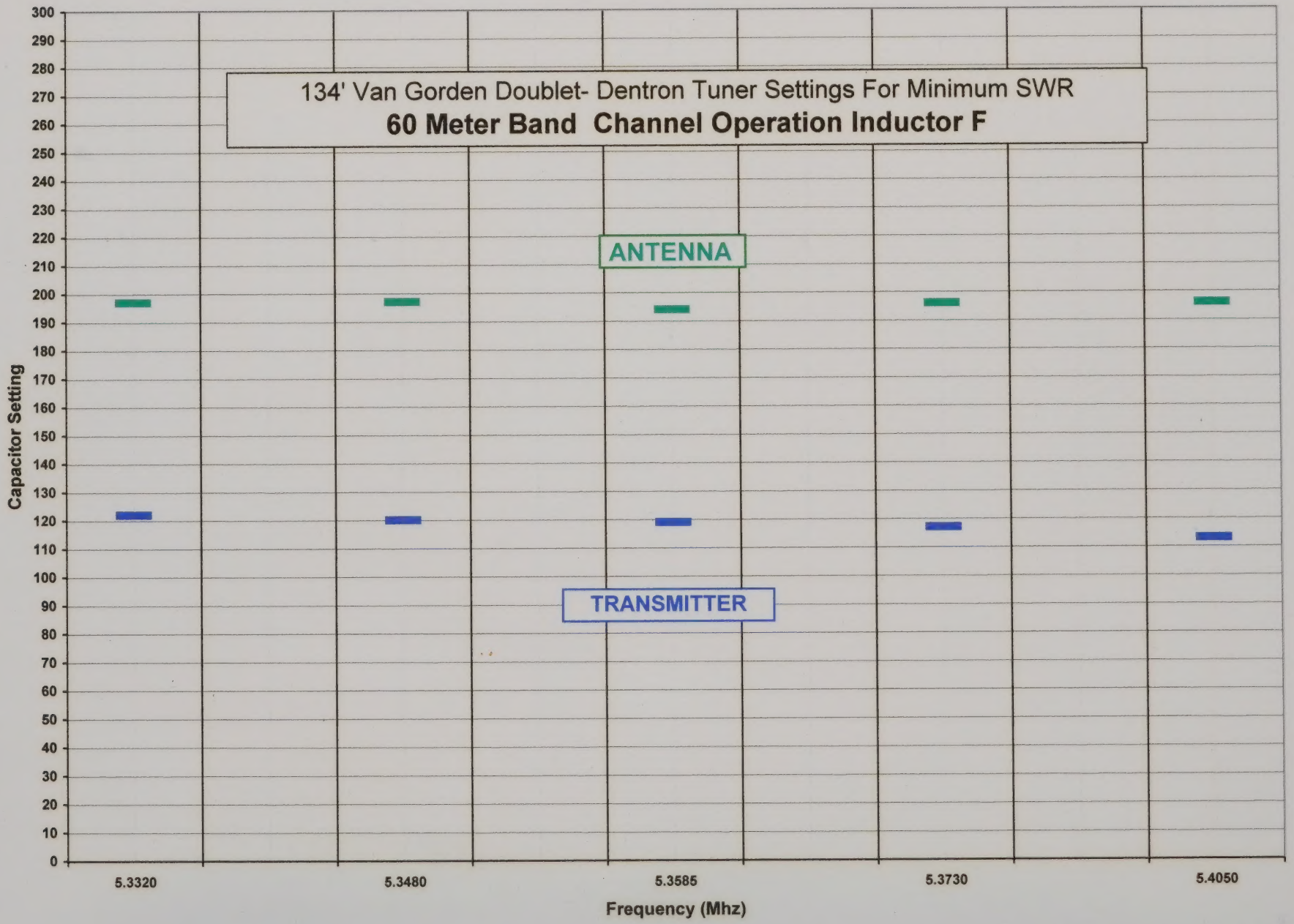


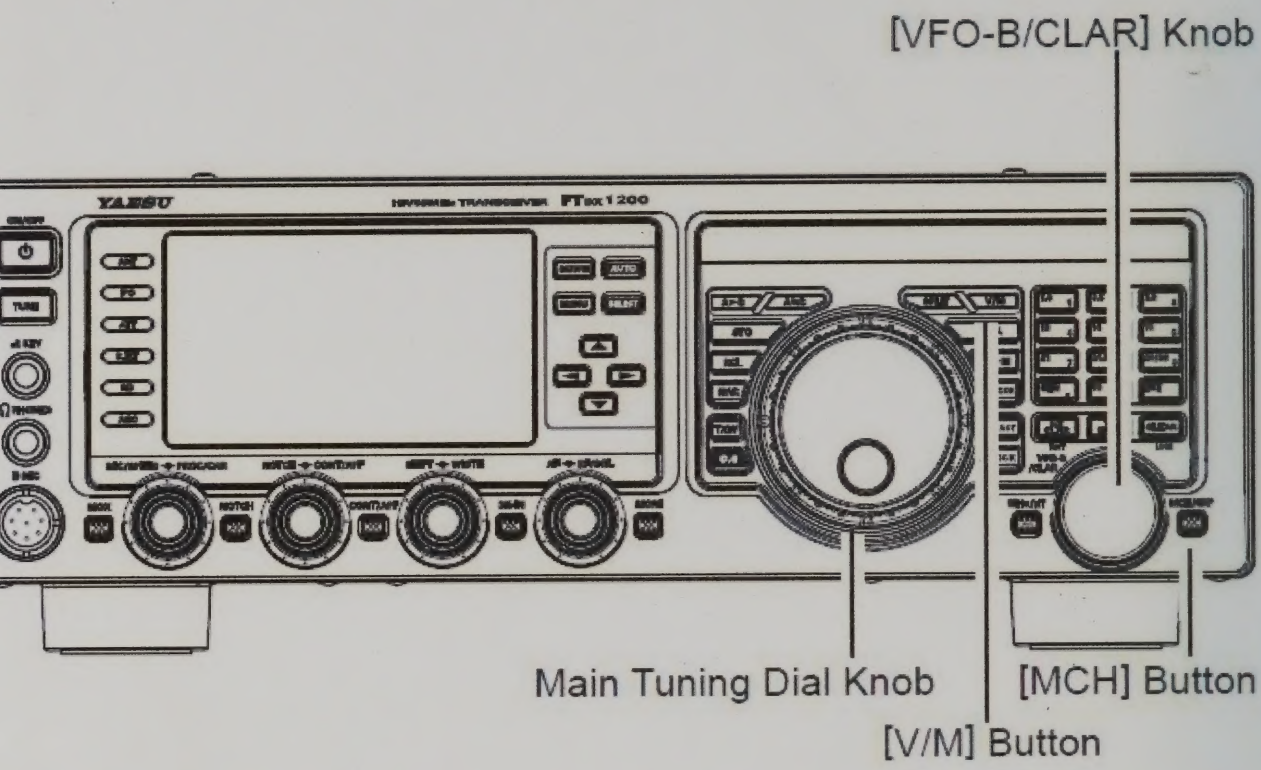
1.885 103 L 195 ?

1.972 73 L 223 1:1 ?


80
60
40
30
20
17
15
12
10
TRANSMITTER
ANTENNA
INDUCTOR D
INDUCTOR C
134' Van Gorden Doublet- Dentron Tuner Settings For Minimum SWR
80 Meter Band General Class Allocation
SWR (1.xx:1)
Capacitor Setting
Frequency (Khz)
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
3500
3525
3550
3575
3600
3625
3650
3675
3700
3725
3750
3775
3800
3825
3850
3875
3925
3950
3975
4000

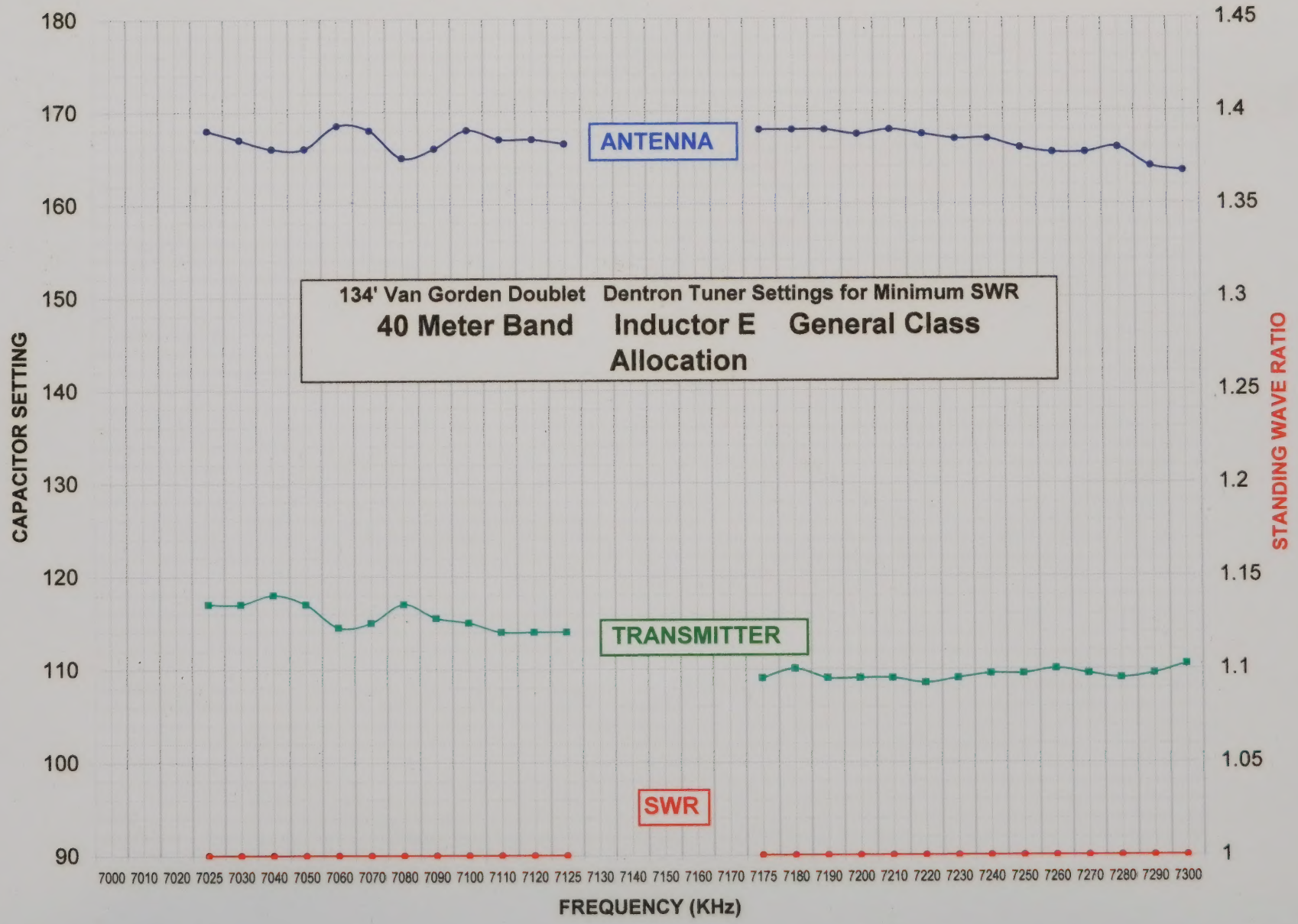
60 40 30 20 17 15 12 10



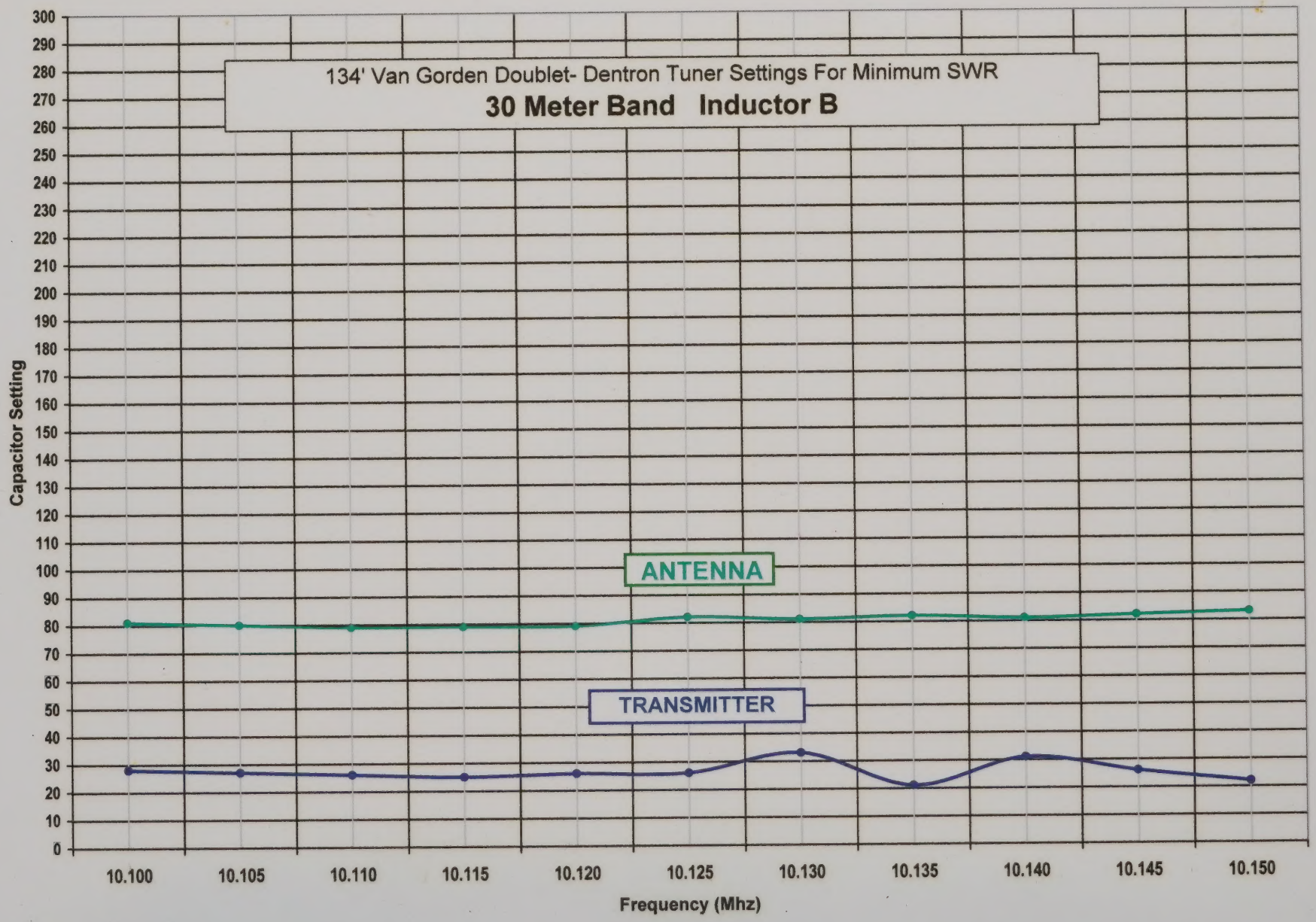


Channel Number	Frequency	
	U.S. Version	U.K. Version
5M-01	5.332000 MHz	5.260000 MHz
5M-02	5.348000 MHz	5.280000 MHz
5M-03	5.358500 MHz	5.290000 MHz
5M-04	5.373000 MHz	5.368000 MHz
5M-05	5.405000 MHz	5.373000 MHz
5M-06	5.332000 MHz	5.400000 MHz
5M-07	5.348000 MHz	5.405000 MHz
5M-08	5.358500 MHz	-
5M-09	5.373000 MHz	-
5M-10	5.405000 MHz	-

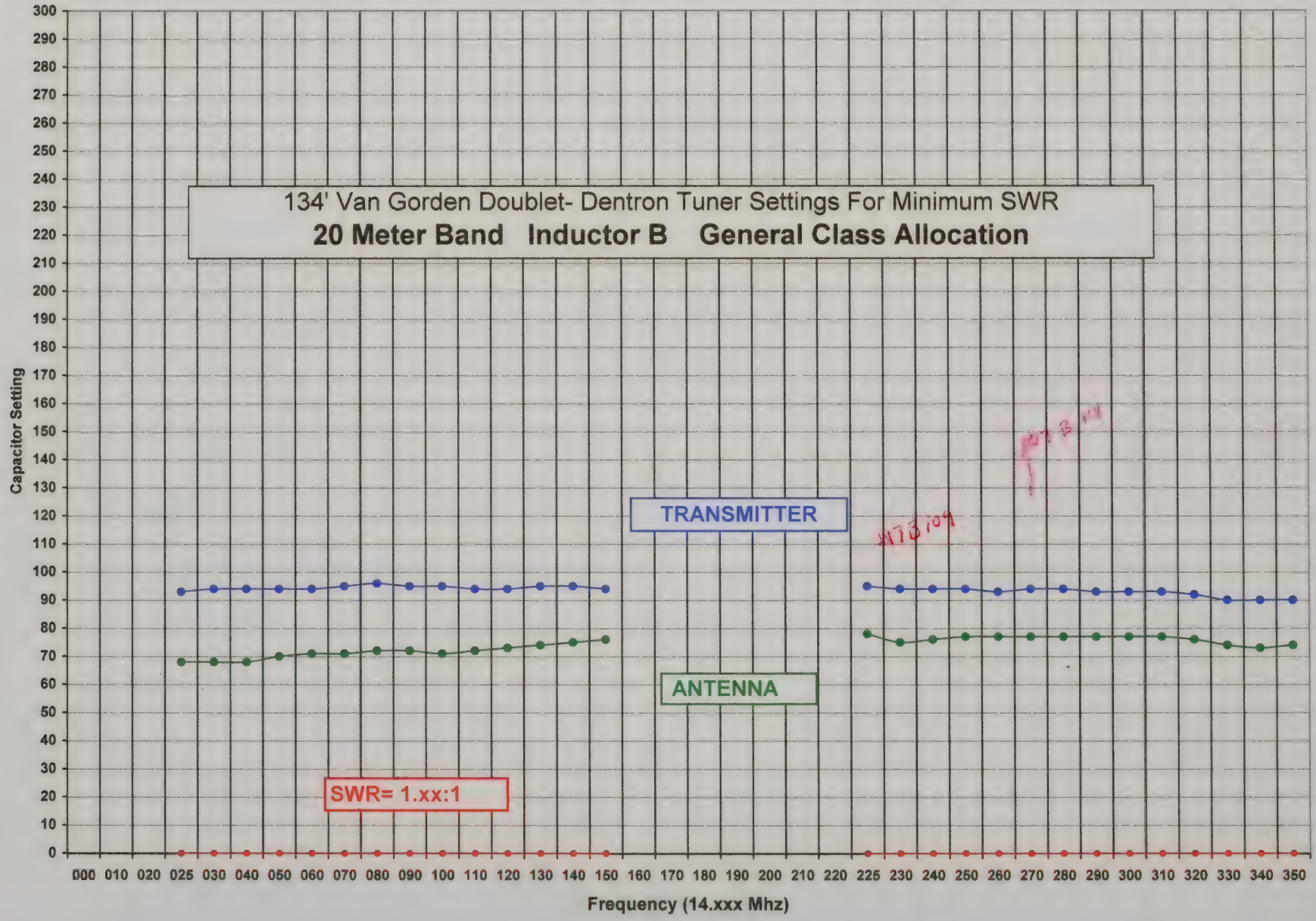
40 30 20 17 15 12 10



30 20 17 15 12 10

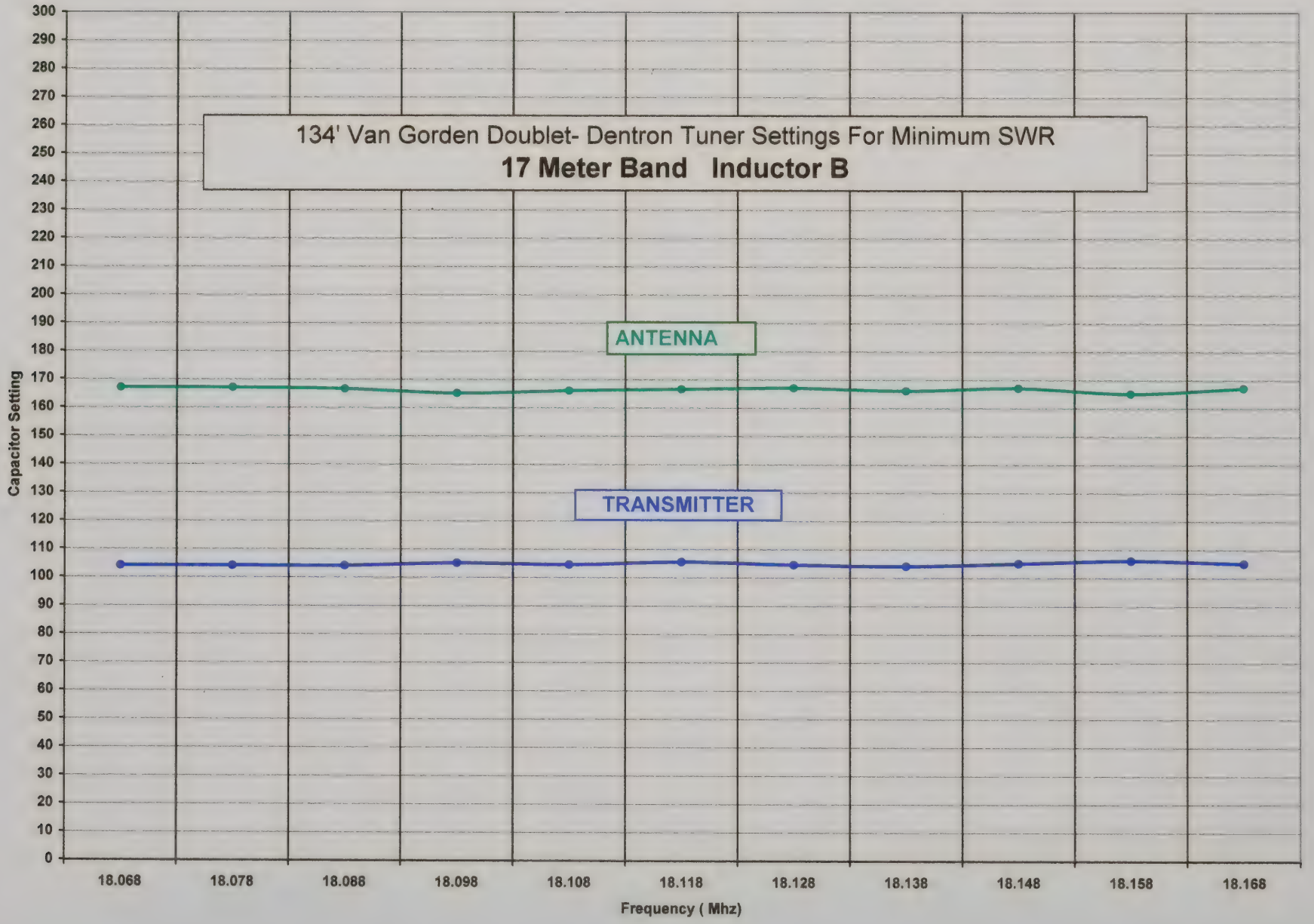


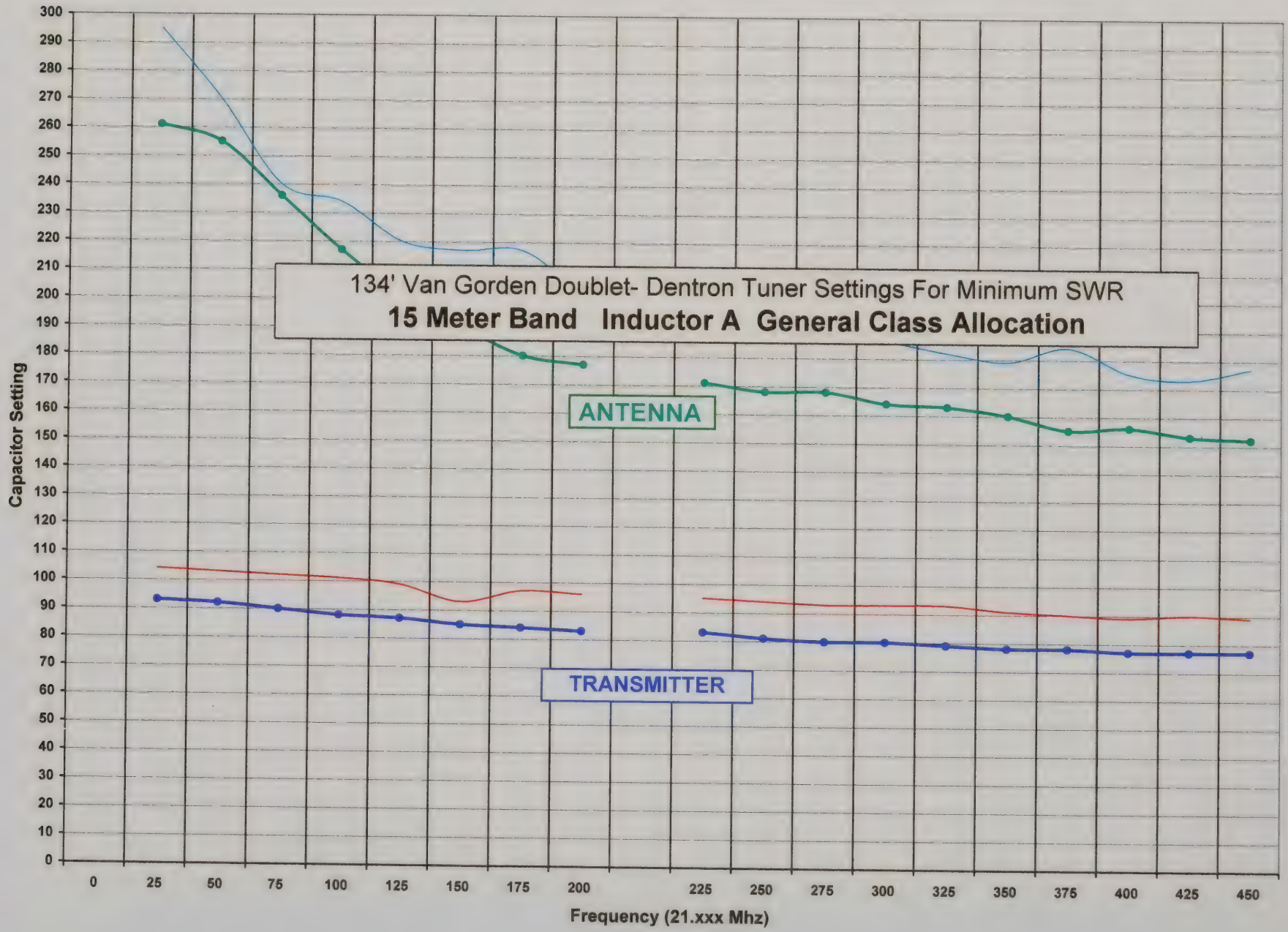
90B123 .125


134' Van Gorden Doublet- Dentron Tuner Settings For Minimum SWR
20 Meter Band Inductor B General Class Allocation
TRANSMITTER
ANTENNA
SWR= 1.xx:1
Capacitor Setting
Frequency (14.xxx Mhz)
300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
000 010 020 025 030 040 050 060 070 080 090 100 110 120 130 140 150 160 170 180 190 200 210 220 225 230 240 250 260 270 280 290 300 310 320 330 340 350

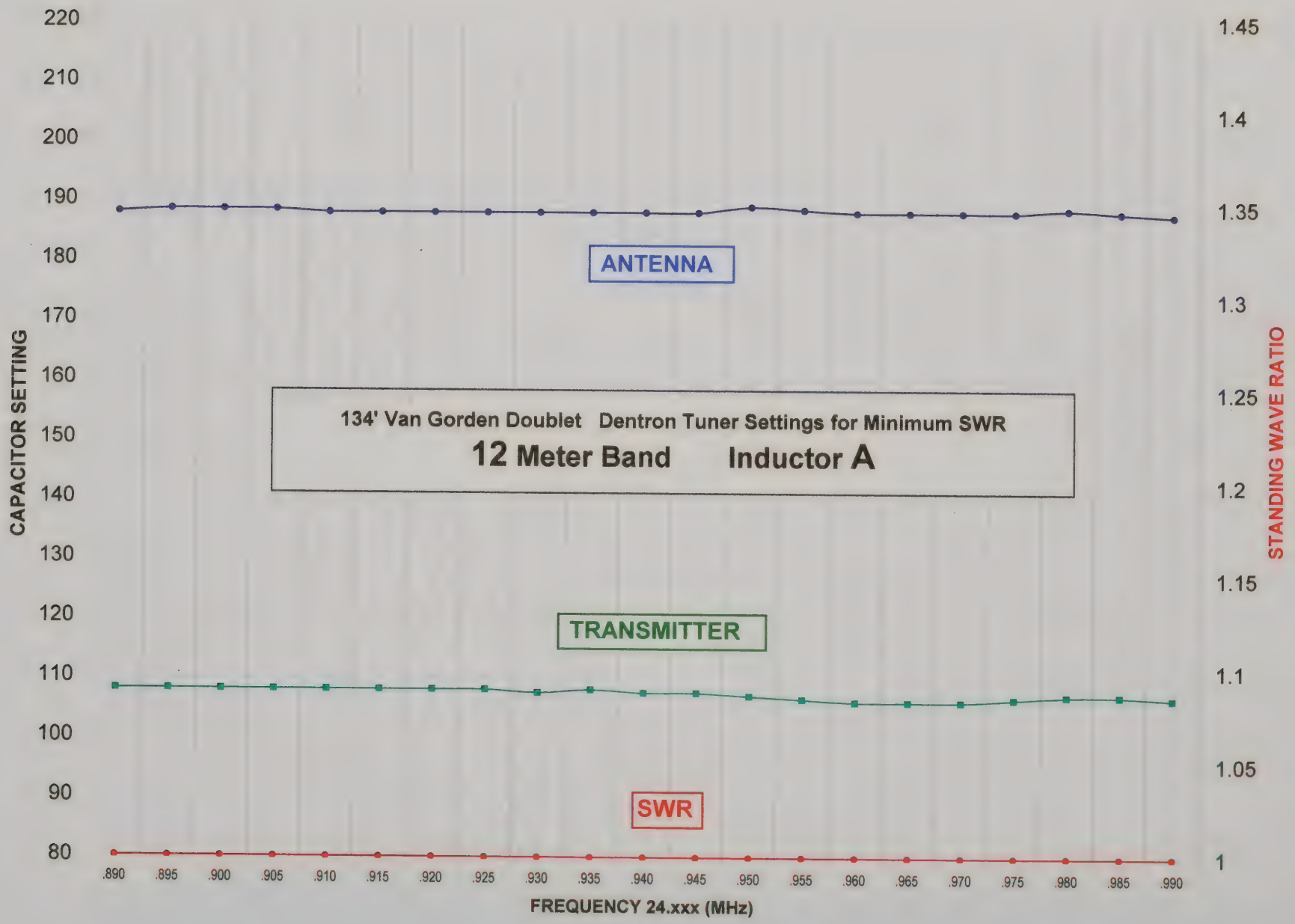
388 88

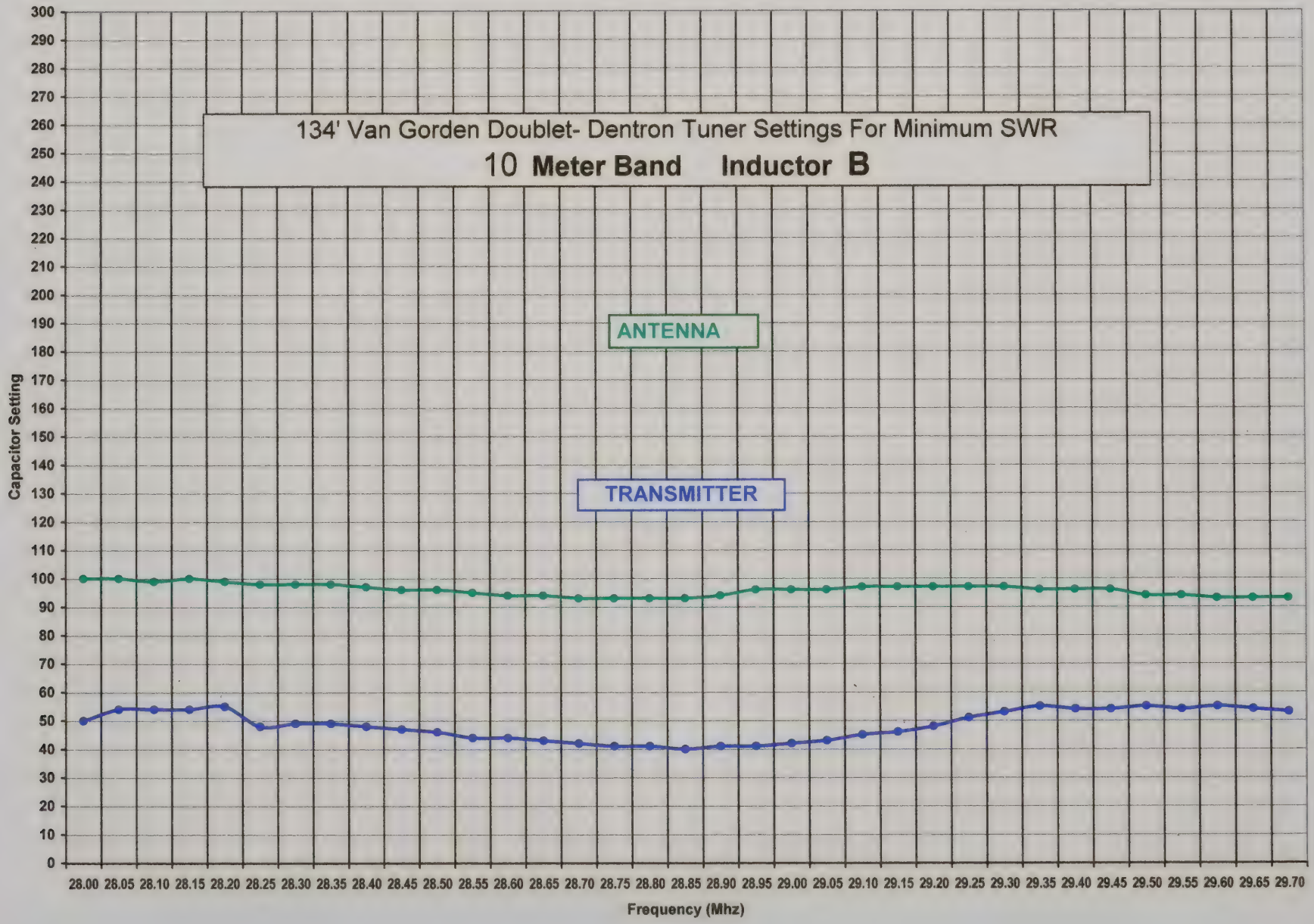
43B 103
14.231

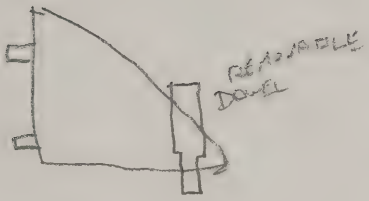

134' Van Gorden Doublet- Dentron Tuner Settings For Minimum SWR
17 Meter Band Inductor B
ANTENNA
TRANSMITTER
Capacitor Setting
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
18.068
18.078
18.088
18.098
18.108
18.118
18.128
18.138
18.148
18.158
18.168
Frequency (Mhz)


134' Van Gorden Doublet- Dentron Tuner Settings For Minimum SWR
15 Meter Band Inductor A General Class Allocation
ANTENNA
TRANSMITTER
Capacitor Setting
Frequency (21.xxx Mhz)
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
425
450

LBAL


134' Van Gorden Doublet Dentron Tuner Settings for Minimum SWR
12 Meter Band Inductor A
ANTENNA
TRANSMITTER
SWR
CAPACITOR SETTING
STANDING WAVE RATIO
FREQUENCY 24.xxx (MHz)
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05
1
.890
.895
.900
.905
.910
.915
.920
.925
.930
.935
.940
.945
.950
.955
.960
.965
.970
.975
.980
.985
.990


134' Van Gorden Doublet- Dentron Tuner Settings For Minimum SWR
10 Meter Band Inductor B
ANTENNA
TRANSMITTER
Capacitor Setting
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
28.00 28.05 28.10 28.15 28.20 28.25 28.30 28.35 28.40 28.45 28.50 28.55 28.60 28.65 28.70 28.75 28.80 28.85 28.90 28.95 29.00 29.05 29.10 29.15 29.20 29.25 29.30 29.35 29.40 29.45 29.50 29.55 29.60 29.65 29.70
Frequency (Mhz)


REMOVABLE
DOWEL

R Baker

116.86 ?

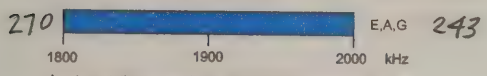
US Amateur Bands

April 15, 2000

Novice, Advanced and Technician Plus Allocations

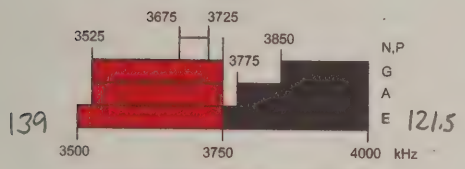
Novice, Advanced and Technician Plus licenses will not be issued after April 15, 2000. However, the FCC has allowed the frequency allocations for these license classes to remain in effect.

160 METERS



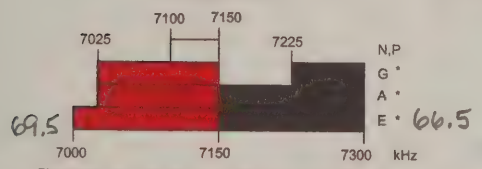
Amateur stations operating at 1900-2000 kHz must not cause harmful interference to the radiolocation service and are afforded no protection from radiolocation operations.

80 METERS



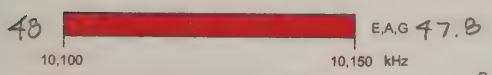
5167.5 kHz (SSB only): Alaska emergency use only.

40 METERS



* Phone and Image modes are permitted between 7075 and 7100 kHz for FCC licensed stations in ITU Regions 1 and 3 and by FCC licensed stations in ITU Region 2 West of 130 degrees West longitude or South of 20 degrees North latitude. See Sections 97.305(c) and 97.307(f)(11). Novice and Technician Plus licensees outside ITU Region 2 may use CW only between 7050 and 7075 kHz. See Section 97.301(e). These exemptions do not apply to stations in the continental US.

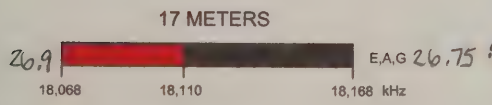
30 METERS



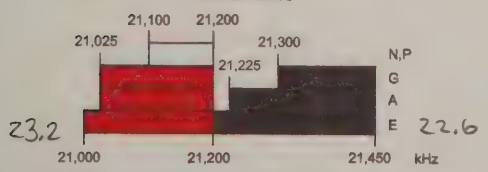
Maximum power on 30 meters is 200 watts PEP output. Amateurs must avoid interference to the fixed service outside the US.

20 METERS

17 METERS

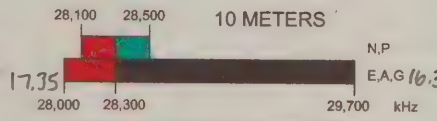


15 METERS



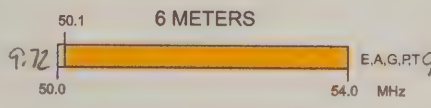
12 METERS

10 METERS



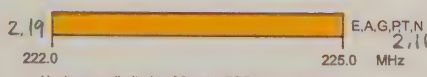
Novices and Technician Plus Licensees are limited to 200 watts PEP output on 10 meters.

6 METERS



2 METERS

1.25 METERS



Novices are limited to 25 watts PEP output from 222 to 225 MHz.

70 CENTIMETERS **

33 CENTIMETERS **

23 CENTIMETERS **

Novices are limited to 5 watts PEP output from 1270 to 1295 MHz.

US AMATEUR POWER LIMITS

At all times, transmitter power should be kept down to that necessary to carry out the desired communications. Power is rated in watts PEP output. Unless otherwise stated, the maximum power output is 1500 W. Power for all license classes is limited to 200 W in the 10,100-10,150 kHz band and in all Novice subbands below 28,100 kHz. Novices and Technicians are restricted to 200 W in the 28,100-28,500 kHz subbands. In addition, Novices are restricted to 25 W in the 222-225 MHz band and 5 W in the 1270-1295 MHz subband.

Operators with Technician class licenses and above may operate on all bands above 50 MHz. For more detailed information see *The FCC Rule Book*.

KEY

- = CW, RTTY and data
- = CW, RTTY, data, MCW, test, phone and image
- = CW, phone and image
- = CW and phone
- = CW, RTTY, data, phone, and image
- = CW only

N = NOVICE
T = TECHNICIAN
G = GENERAL
A = ADVANCED
E = EXTRA CLASS
P = TECHNICIAN PLUS

** Geographical and power restrictions apply to these bands. See The FCC Rule Book for more information about your area.

Above 23 Centimeters:

All licensees except Novices are authorized all modes on the following frequencies:
2300-2310 MHz
2390-2450 MHz
3300-3500 MHz
5650-5925 MHz
10.0-10.5 GHz
24.0-24.25 GHz
47.0-47.2 GHz
75.5-81.0 GHz
119.98-120.02 GHz
142-149 GHz
241-250 GHz
All above 300 GHz

For band plans and sharing arrangements, see *The FCC Rule Book*.

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Half wavelengths noted in feet!

4		8	
Alabama	AL	Michigan	MI
Georgia	GA	Ohio	OH
Kentucky	KY	West Virginia	WV
North Carolina	NC		
Northern Florida	NFL	9	
South Carolina	SC		
Southern Florida	SFL	Illinois	IL
West Central Florida	WCF	Indiana	IN
Tennessee	TN	Wisconsin	WI
Virginia	VA		
Puerto Rico	PR		
Virgin Islands	VI	0	
5		Colorado	CO
		Iowa	IA
Arkansas	AR	Kansas	KS
Louisiana	LA	Minnesota	MN
Mississippi	MS	Missouri	MO
New Mexico	NM	Nebraska	NE
North Texas	NTX	North Dakota	ND
Oklahoma	OK	South Dakota	SD
South Texas	STX		
West Texas	WTX		
CANADA			
Maritime	MAR	Saskatchewan	SK
Newfoundland/Labrador	NL	Alberta	AB
Quebec	QC	British Columbia	BC
Ontario	ON	Northwest Territories/Yukon/	NWT
Manitoba	MB	Nunavut	

ARRL/CANADIAN SECTION ABBREVIATIONS

1		6	
Connecticut	CT	East Bay	EB
Eastern Massachusetts	EMA	Los Angeles	LAX
Maine	ME	Orange	ORG
New Hampshire	NH	Santa Barbara	SB
Rhode Island	RI	Santa Clara Valley	SCV
Vermont	VT	San Diego	SDG
Western Massachusetts	WMA	San Francisco	SF
2		San Joaquin Valley	SJV
		Sacramento Valley	SV
Eastern New York	ENY	Pacific	PAC
New York City-Long Island	NLI	7	
Northern New Jersey	NNJ		
Northern New York	NNY	Arizona	AZ
Southern New Jersey	SNJ	Eastern Washington	EWA
Western New York	WNY	Idaho	ID
3		Montana	MT
		Nevada	NV
Delaware	DE	Oregon	OR
Eastern Pennsylvania	EPA	Utah	UT
Maryland-DC	MDC	Western Washington	WWA
Western Pennsylvania	WPA	Wyoming	WY
		Alaska	AK

Dual Band
144/440 MHz
Magnet Mount Mobile Antenna
2.6 dB-2M / 6.3 dB-440 MHz
Model MFJ-1729

For **MOBILES** and **HANDHELDS** (includes **free** BNC adapter for handhelds)

Features:

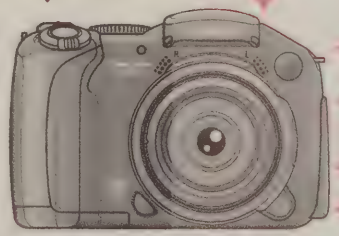
- Dual Band -- covers both 144 *and* 440 MHz with a single antenna -- perfect for dual band radios.
- 2.6 dB gain on 2 Meters -- covers entire 2 Meter band from 144 to 148 MHz with low SWR.
- 6.3 dB gain on 440 MHz band -- covers entire 70 cm band from 440 to 450 MHz with low SWR.
- Handle up to 200 watts of power -- amplifier ready.
- Extra powerful magnet holds at highway speeds.
- 29 inch slim black stainless steel radiator -- gives you maximum range and minimum wind load.
- Including 12 feet of coax with PL-259 connector for mobile radios and free BNC adaptor for handhelds.
- *Famous* MFJ one full year *No Matter What*™ Unconditional Guarantee -- that means we will repair or replace your MFJ-1729 (at our option) no matter what for one full year.

PowerShot S3 IS SYSTEM MAP
DIGITAL CAMERA

Canon

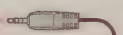
Supplied with Camera

Neck Strap NS-DC4

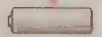

PowerShot S3 IS

Interface Cable
IFC-400PCU (*1)

Memory Card (16MB)


Stereo/Video Cable
STV-250N (*1)

Lens Cap


AA Alkaline Batteries (×4)

Canon Digital Camera Solution Disk

Lens Adapter/Hood Set LAH-DC20

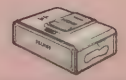
Conversion Lens Adapter LA-DC58E

Lens Hood LH-DC40

Wide Converter WC-DC58A

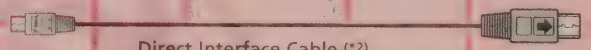
Tele-converter TC-DC58B

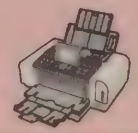
Close-up Lens 500D (58mm)


SELPHY CP Series Compact Photo Printers (*3)

PCMCIA Adapter (PC Card Adapter)

USB Card Reader


Direct Interface Cable (*2)


Direct Print Compatible Bubble Jet Printer (PIXMA series/ SELPHY DS series)

USB Port

PC Card Slot

Windows/Macintosh

High-Power Flash HF-DC1

Battery/Charger Kit CBK4-300 (*4)

- Battery Charger CB-5AH/CB-5AHE
- AA-size NiMH batteries NB-3AH (×4)

* NiMH Battery NB4-300 (set of 4 AA-size) also available separately

Compact Power Adapter CA-PS700

SD Memory Card
- SDC-128M
- SDC-512MSH

Video In Terminal

Audio In Terminal (R/L)

TV/Video

*1 Also available for purchase separately.
*2 See the user guide supplied with the Bubble Jet printer for more information on the printer and interface cables.
*3 This camera can also be connected to the Card Photo Printer CP-10/CP-100/CP-200/CP-300.
*4 The Battery and Charger Kit CBK4-200 can also be used.

CDI-E216-010 XXXXXXXX

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Confirming the Package Contents

Your camera package includes all of the following items. If any of these items are missing, please contact the dealer for assistance.

- Digital Camera
- Lens Cap
- Neck Strap NS-DC4
- AA Alkaline Batteries (×4)
- Memory Card (16MB)
- Interface Cable IFC-400PCU
- Stereo/Video Cable STV-250N
- Canon Digital Camera Solution Disk
- Basic Camera User Guide
- Advanced Camera User Guide
- Direct Print User Guide
- Software Starter Guide
- System Map (this sheet)
- Warranty Card
- "For Windows® XP and Mac OS X Users" Leaflet
- "Canon Customer Support" Leaflet

Optional Accessories

The following camera accessories are sold separately. **Some accessories are not sold in some regions.**

Lenses, Lens Adapter

- **Lens Adapter/Lens Hood Set LAH-DC20**
  This conversion lens adapter and hood set is required for mounting the wide converter and tele-converter to the camera.
- **Wide Converter WC-DC58A**
  Converts the focal length of the body lens by a factor of approximately 0.75 when attached.
- **Tele-converter TC-DC58B**
  Converts the focal length of the body lens by a factor of approximately 1.5 when attached.
- **Close-up Lens 500D (58mm)**
  This lens can be used to take close-ups of subjects that are 35 to 50 cm (at maximum telephoto) from the front of the lens.

Flash

- **High-Power Flash HF-DC1**
  This attachable supplementary flash can be used to capture photographic subjects that are too distant for the built-in flash to illuminate.

Power Supplies

- **Compact Power Adapter CA-PS700**
  This adapter lets you power the camera from any standard household power outlet. Recommended to power a camera for an extended period of time or when connecting to a computer.
- **Battery/Charger Kit CBK4-300**
  This dedicated battery charger kit includes both a charger unit and four rechargeable AA-size NiMH (nickel metal hydride) batteries. Convenient when taking or playing back large numbers of images.
- **NiMH Battery NB4-300**
  A set of four rechargeable AA-size NiMH batteries.

Other Accessories

- **SD Memory Card**
  SD Memory Cards are used to store images recorded by the camera.
  Canon brand cards are available in 128 MB and 512 MB capacities.
- **Interface Cable IFC-400PCU**
  Use this cable to connect the camera to a computer, Compact Photo Printer (SELPHY series), or to a Bubble Jet printer (refer to your Bubble Jet printer user guide).
- **Stereo/Video Cable STV-250N**
  Use this cable to connect the camera to a TV set (sound can be played in stereo).

Direct Print Compatible Printers

Canon offers the following separately sold printers for use with the camera. You can produce photo quality prints quickly and easily by connecting them to the camera with a single cable and operating the camera's controls.

- **Compact Photo Printers (SELPHY series)**
- **PIXMA series printers**

For more information, visit your nearest Canon retailer.

Frequency	Tone	Location	County	Call	Use
52.8700-	114.8	West Chicago	Dupage	W9DMW	OPEN
145.1700-	103.5	Naperville	Dupage	WA9WSL	OPEN
145.1900-	114.8	Darien	Dupage	W9ANL	OPEN
145.3100-	107.2	Wheaton	Dupage	W9CCU	OPEN
145.3900-	103.5	Wheaton	Dupage	W9CCU	OPEN
145.4300-	107.2	Downers Gr	Dupage	W9DUP	OPEN
145.4900-	107.2	Westmont	Dupage	WB9UGX	OPEN
146.9700-	107.2	Hinsdale	Dupage	K9ONA	OPEN
147.3600+	136.5	Wheaton	Dupage	W9BZW	OPEN
223.8600-	110.9	Westmont	Dupage	N9TO	OPEN
224.1400-	110.9	Glendale Hts	Dupage	W9CCU	OPEN
224.2000-	110.9	Naperville	Dupage	W9NPD	OPEN
224.2200-	110.9	Bloomingdale	Dupage	K9NB	OPEN
224.2600-	110.9	Lombard	Dupage	WA9VGI	OPEN
224.3600-	110.9	Lisle	Dupage	WA9WSL	OPEN
224.5000-	192.8	Itasca	Dupage	WA9ZZU	OPEN
224.6200-	110.9	Lisle	Dupage	W9AEK	OPEN
224.6400-	110.9	West Chicago	Dupage	N9XP	OPEN
224.6800-	110.9	Downers Gr	Dupage	W9DUP	OPEN
224.7200-	103.5	West Chicago	Dupage	W9DMW	OPEN
224.8200-		Hinsdale Cent HS	Dupage	K9ONA	OPEN
440.10625+		DuPage Co	Dupage	KC9PWC	OPEN
440.10625+		Glendale Hts	Dupage	KC9PWC	OPEN
441.8500+	114.8	West Chicago	Dupage	KC9JBW	OPEN
442.2250+	114.8	Lisle	Dupage	WA9WSL	OPEN
442.2500+	114.8	Downers Gr	Dupage	KC9WPR	OPEN
442.5500+	114.8	Downers Gr	Dupage	W9DUP	OPEN
442.7000+	203.5	Lisle	Dupage	W9AEK	OPEN
442.8750+	114.8	Downers Gr	Dupage	W9YRC	OPEN
443.0500+	114.8	Naperville	Dupage	NE9MA	OPEN
443.1250+		Oak Brook	Dupage	N9XKY	OPEN
443.1250+	114.8	Oak Brook	Dupage	N8XKY	OPEN
443.2000+	100	Downers Gr	Dupage	N9EAO	OPEN
443.9000+	114.8	Downers Gr	Dupage	N9ATO	OPEN
444.0500+	114.8	Wheaton	Dupage	WA9E	OPEN
444.2000+	114.8	Hinsdale	Dupage	KB9OYP	OPEN
444.2500+	114.8	Lombard	Dupage	N9ECQ	OPEN
444.2750+	114.8	Wheaton	Dupage	KA9KDC	OPEN
444.4750+	114.8	Downers Gr	Dupage	W9CCU	OPEN
444.8750+	114.8	Glendale Hts	Dupage	K9XD	OPEN
927.7000-	114.8	West Chicago	Dupage	W9DMW	OPEN
1293.1000-	114.8	Lisle	Dupage	W9AEK	OPEN

Frequency	Tone	Location	County	Call	Use
145.1300-	107.2	Kankakee	Kankakee	W9AZ	OPEN
146.9400-	107.2	Kankakee	Kankakee	W9AZ	OPEN
147.1650+	107.2	Kankakee	Kankakee	WD9HSY	OPEN
441.3000+	114.8	Grant Park	Kankakee	WA9WLN	OPEN
441.8750+		Grant Park	Kankakee	W9LEO	OPEN
444.8000+	100	Kankakee	Kankakee	W9AZ	OPEN

Frequency	Tone	Location	County	Call	Use
145.1900-	88.5	Marion	Williamson	W9RNM	OPEN
145.2100-	107.2	New Lenox	Will	WB9IRL	OPEN
145.2500-	156.7	Joliet	Will	KB9LWY	OPEN
146.8200-	107.2	Joliet	Will	W9OFR	OPEN
147.3000+	94.8	Joliet	Will	WD9AZK	OPEN
147.3300+	107.2	Bolingbrook	Will	K9BAR	OPEN
223.8200-		Joliet	Will	W9OFR	OPEN
224.4200-	114.8	New Lenox	Will	N2BJ	OPEN
224.5400-	110.9	Bolingbrook	Will	K9BAR	OPEN
224.9400-	114.8	Lockport	Will	N2BJ	OPEN
440.0000+	114.8	Joliet	Will	KC9LYB	OPEN
440.0750+	162.2	Plainfield	Will	KC9QHH	OPEN
440.1500+	114.8	Joliet	Will	KB9LWY	OPEN
441.9750+	114.8	Elwood	Will	W0COP	OPEN
442.0250+	100	Lockport	Will	NC9T	OPEN
442.3000+	114.8	Joliet	Will	W9OFR	OPEN
442.83125+	MT	Homer Glen	Will	KC9NCS	OPEN
442.9500+	114.8	Joliet	Will	WA9VGI	CLOSED
443.2250+	141.3	Lockport	Will	KB9KV	OPEN
443.3250+	114.8	Frankfort	Will	WD9HSY	OPEN
443.5250+	114.8	Bolingbrook	Will	K9BAR	OPEN
443.7000+	114.8	Bolingbrook	Will	K9BAR	OPEN
444.4000+	MT	New Lenox	Will	N2BJ	OPEN
444.5500+	114.8	Frankfort	Will	W9WIL	OPEN
927.5250-	151.4	Joliet	Will	N9WYS	OPEN
927.5875-	D411	Lockport	Will	N9OWR	OPEN

angel.afterlife
fakku.net
porn.md
obsessedwithhead

JW Svalbard
JX Jan Mayen
JY Jordan
K,W,N, AA-AK United States
KG4 Guantanamo Bay
KHØ Mariana Is
KH1 Baker & Howland Is
KH2 Guam
KH3 Johnston Is
KH4 Midway Is
KH5 Palmyra, Jarvis Is
KH5K Kingman Reef
KH6, 7 Hawaii
KH7K Kure Is
KH8 Am Samoa
KH8 Swain's Island
KH9 Wake Is
KL, WL NL, WL Alaska
KP1 Navassa Is
KP2 Virgin Is
KP3, 4 Puerto Rico
KP5 Desecheo Is
LA- LN Norway
LO- LW Argentina
LX Luxembourg
LY Lithuania
LZ Bulgaria
OA-OC Peru
OD Lebanon
OE Austria
OF-OI Finland
OHØ Aland Is
OJØ Market Reef
OK-OL Czech Republic
OM Slovak Republc
OM-OT Belgium
OX Greenland
OY Faroe Is
OU-OV, OZ Denmark
P2 Papua New Guinea
P4 Aruba
P5 DPR of Korea
PA-PI Netherlands
PJ2 Curacao
PJ2* Neth Antilles
PJ4 Bonaire
PJ5, 6 Saba & St Eustatius
PJ5* St Maarten, Saba, St Eus
PJ7 St Maarten
PP-PY ZV-ZZ Brazil
PP-PYØF Fernando de Noronha
PP-PYØP St Peter & St Paul Rocks
PP-PYØT Trindade & Martin Vaz Is
PZ Surinam
R1/F Franz Josef Land
S0 Western Sahara
S2 Bangladesh
S5 Slovenia
S7 Seychelles
S9 Sao Tome & Principe
SA-SM 7S, 8S Sweden
SN-SR Poland
ST Sudan
SU Egypt
SV-SZ Greece
SV/A Mt Athos
SV5, J45 Dodecanese
SV9- J49 Crete
T2 Tuvalu
T30 West Kiribati
T31 Central Kiribati
T32 East Kiribati
T33 Banaba
T5, 6O Somalia
T6 Afghanistan
T7 San Marino
T8 Palau
TA, TC Turkey
TF Iceland
TG, TD Guatemala
TI, TE Costa Rica
TI9 Cocos Is
TJ Cameroon
TK Corsica
TL Central African Rep
TN Rep of the Congo
TR Gabon
TT Chad
TU Ivory Coast
TY Benin
TZ Mali
UA-UI1-7 RA-RZ European Russia
UA2, RA2 Kaliningrad
UA-UA8-Ø RA-RZ Russia (Asiatic)
UJ-UM Uzbekistan
UN-UQ Kazakhstan
UR-UZ EM-EZO Ukraine
V2 Antigua, Barbuda
V3 Belize
V4 St Kitts, Nevis
V5 Namibia
V6 Micronesia
V7 Marshall Is
V8 Brunei
VA-VG VO-VY Canada
VK, AX Australia
VKØ Heard Is
VKØ Macquarie Is
VK9C Cocos-Keeling Is
VK9L Lord Howe Is
VK9M Mellish Reef
VK9N Norfolk Is
VK9W Willis Is
VK9X Christmas Is
VP2E Anguilla
VP2M Montserrat
VP2V Br Virgin Is
VP5 Turks & Caicos Is
VP6 Pitcairn Is
VP6 Ducie Is
VP8 Falkland Is
VP8, LU So Georgia Is
VP8, LU So Orkney Is
VP8, LU So Sandwich Is
VP8, LU,CE9 HFØ, 4K1 So Shetland Is
VP9 Bermuda
VQ1* Zanzibar
VQ9 Chagos
VR Hong Kong
VU India
VU4 Andaman & Nicobar Is
VU7 Lakshadweep Is
XA-XI Mexico
XA4-XI4 Revilla Gigedo
XT Burkina Faso
XU Cambodia
XW Laos
XX9 Macao
XY, XZ Myanmar
YA, T6 Afghanistan
YB-YH Indonesia
YI Iraq
YJ Vanuatu
YK Syria
YL Latvia
YN, H6-7, HT Nicaragua
YO-YR Romania
YS, HU El Salvador
YT, YU Serbia
YV-YY, 4M Venezuela
YV0 Aves Is
Z2 Zimbabwe
Z3 Macedonia
Z8 Rep of South Sudan
ZA Albania
ZB2 Gibraltar
ZC4 Cyprus UK SBA
ZD7 St Helena
ZD8 Ascension Is
ZD9 Tristan da Cunha, Gough Is
ZF Cayman Is
ZK2 Niue
ZK3 Tokelau Is
ZL- ZM New Zealand
ZL7 Chatham Is
ZL8 Kermadec Is
ZL9 Auckland, Campbell Is
ZP Paraguay
ZR-ZU So Africa
ZS8 Pr Edward & Marion Is

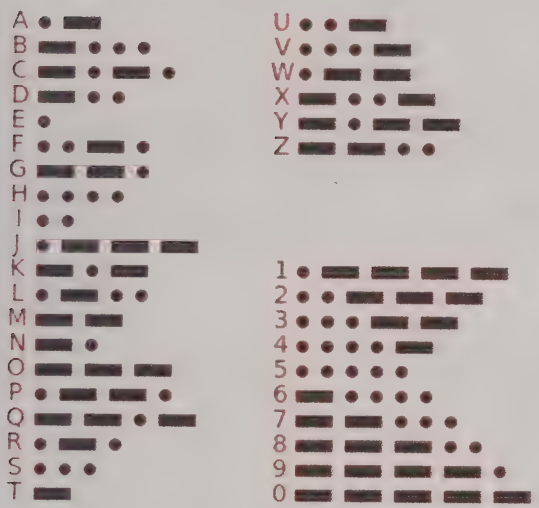
YA, T6 Afghanistan
3B6, 7 Agalega & St Brandon
OHØ Aland Is
KL, AL NL, WL Alaska
ZA Albania
7T-7Y Algeria
FT/Z Amsterdam & St Paul Is
VU4 Andaman & Nicobar Is
C3 Andorra
D2, D3 Angola
VP2E Anguilla
3CØ Annobon Is
CE9, KC4 Antarctica
V2 Antigua, Barbuda
LO- LW Argentina
EK Armenia
P4 Aruba
ZD8 Ascension Is
ZL9 Auckland, Campbell Is
FO, TO Austral Is
VK, AX Australia
OE Austria
YV0 Aves Is
4J, 4K Azerbaijan
CU Azores
C6 Bahamas
A9 Bahrain
HKØ* Bajo Nuevo
KH1 Baker & Howland Is
EA6-EH6 Balearic Is
T33 Banaba
S2 Bangladesh
8P Barbados
EU-EW Belarus
OM-OT Belgium
V3 Belize
TY Benin
VP9 Bermuda
A5 Bhutan
CP Bolivia
PJ4 Bonaire
E7 Bosnia-Hercegovina
A2 Botswana
3Y Bouvet
PP- PY ZV- ZZ Brazil
V8 Brunei
LZ Bulgaria
XT Burkina Faso
9U Burundi
XU Cambodia
TJ Cameroon
VA- VG VO- VY Canada
EA8-EH8 Canary Is
D4 Cape Verde
ZF Cayman Is
TL Central African Rep
EA9-EH9 Ceuta & Melilla
TT Chad
VQ9 Chagos
ZL7 Chatham Is
FK, TX Chesterfield Is
CA- CE Chile
B China
VK9X Christmas Is
FO, TX Clipperton Is
TI9 Cocos Is
VK9C Cocos-Keeling Is
HJ,HK 5J, 5K Colombia
D6 Comoros
9Q- 9T Congo, Dem Rep of
TN Congo, Republic of
3D2 Conway Reef
E5 Cook Is, North
E5 Cook Is, South
TK Corsica
TI, TE Costa Rica
SV9- J49 Crete
9A Croatia
FT/W Crozet
CM, CO Cuba
PJ2 Curacao
5B, C4, P3 Cyprus
ZC4 Cyprus UK SBA
OK-OL Czech Republic
OU - OV OZ Denmark
KP5 Desecheo Is
J2 Djibouti
SV5, J45 Dodecanese
J7 Dominica
HI Dominican Rep
VP6 Ducie Is
CEØ Easter Is
HC, HD Ecuador
SU Egypt
YS, HU El Salvador
G, GX, M England
3C Equatorial Guinea
E3 Eritrea
ES Estonia
ET Ethiopia
VP8 Falkland Is
OY Faroe Is
PP-PYØF Fernando de Noronha
3D2 Fiji
OF- OI Finland
F France
R1/F Franz Josef Land
TR Gabon
HC8, HD8 Galapagos Is
C5 Gambia
4L Georgia
DA- DR Germany
9G Ghana
ZB2 Gibraltar
FT/G Glorioso Is
SV-SZ Greece
OX Greenland
J3 Grenada
FG, TO Guadeloupe
KH2 Guam
KG4 Guantanamo Bay
TG, TD Guatemala
GU, GP Guernsey
FY Guiana, French
3X Guinea
J5 Guinea-Bissau
8R Guyana
HH Haiti
KH6, 7 Hawaii
VKØ Heard Is
HQ, HR Honduras
VR Hong Kong
HA, HG Hungary
TF Iceland
VU India
YB-YH Indonesia
EP, EQ Iran
YI Iraq
EI, EJ Ireland
GI, GN Ireland, Northern
GD, GT Isle of Man
4X, 4V Israel
I Italy
4U_ITU ITU Geneva
TU Ivory Coast
6Y Jamaica
JX Jan Mayen
JA-JS 7J-7N Japan
GJ, GH Jersey
KH3 Johnston Is
JY Jordan
FT/J, E TO Juan de Nova, Europa
CEØ Juan Fernandez
UA2, RA2 Kaliningrad
UN-UQ Kazakhstan
5Y, 5Z Kenya
FT/X Kerguelen Is
ZL8 Kermadec Is
KH5K Kingman Reef
T31 Kiribati, Central
T32 Kiribati, East
T30 Kiribati, West
P5 Korea, North
HL, 6K-6N Korea, South
KH7K Kure Is
9K Kuwait
EX Kyrgyzstan
VU7 Lakshadweep Is
XW Laos
YL Latvia
OD Lebanon
7P Lesotho
EL Liberia
5A Libya
HBØ Liechtenstein

LY	Lithuania
VK9L	Lord Howe Is
LX	Luxembourg
XX9	Macao
Z3	Macedonia
VKØ	Macquarie Is
5R	Madagascar
CT3	Madeira Is
7Q	Malawi
9M6, 8	Malaysia, East
9M2, 4	Malaysia, West
8Q	Maldives
TZ	Mali
HKØ	Malpelo Is
9H	Malta
1A	Malta,. SMO
KHØ	Mariana Is
OJØ	Market Reef
FO, TX	Marquesas Is
V7	Marshall Is
FM, TO	Martinique
5T	Mauritania
3B8	Mauritius
FH, TO	Mayotte
VK9M	Mellish Reef
XA-XI	Mexico
V6	Micronesia
KH4	Midway Is
JD1	Minami Torishima
1M*	Minerva Reef
ER	Moldova
3A	Monaco
JT- JV	Mongolia
4O	Montenegro
VP2M	Montserrat
CN	Morocco
C8, C9	Mozambique
SV/A	Mt Athos
XY, XZ	Myanmar
V5	Namibia
C2	Nauru
KP1	Navassa Is
9N	Nepal
PJ2*	Neth Antilles
PA-PI	Netherlands
FK, TX	New Caledonia
ZL- ZM	New Zealand
YN, H6-7 HT	Nicaragua
5U	Niger
5N	Nigeria
E6	Niue
ZK2	Niue
VK9N	Norfolk Is
LA- LN	Norway
JD1	Ogasawara
A4	Oman
AP	Pakistan
T8	Palau
E4	Palestine
KH5	Palmyra, Jarvis Is
HO, HP	Panama
P2	Papua New Guinea
ZP	Paraguay
OA-OC	Peru
3Y	Peter I Is
DU-DZ 4D-4I	Philippines
VP6	Pitcairn Is
SN-SR	Poland
FO, TO	Polynesia, French
CT	Portugal
ZS8	Pr Edward & Marion Is
BV9P	Pratas Is
KP3, 4	Puerto Rico
A7	Qatar
FR, TO	Reunion
XA4-XI4	Revilla Gigedo
3B9	Rodriguez Is
YO-YR	Romania
3D2	Rotuma
UA-UA8-Ø, RA,RZ	Russia (Asiatic)
UA-UI1-7, RA-RZ	Russia (European)
9X	Rwanda
PJ5, 6	Saba & St Eustatius
CYØ	Sable Is
5W	Samoa
KH8	Samoa, American
HKØ	San Andres & Providencia
CEØ	San Felix
T7	San Marino
S9	Sao Tome & Principe
ISØ, IMØ	Sardinia
HZ	Saudi Arabia
BS7	Scarborough Reef
GM, GS	Scotland
6V, 6W	Senegal
YT, YU	Serbia
S7	Seychelles
9L	Sierra Leone
9V	Singapore
OM	Slovak Republc
S5	Slovenia
ZR-ZU	So Africa
VP8, LU	So Georgia Is
VP8, LU	So Orkney Is
VP8, LU	So Sandwich Is
VP8 LU,CE9, HFØ, 4K1	So Shetland Is
H4	Solomon Is
T5, 6O	Somalia
Z8	South Sudan, Rep of
EA- EH	Spain
1S	Spratly Is
4S	Sri Lanka
FJ- TO	St Barthelemy
ZD7	St Helena
V4	St Kitts, Nevis
J6	St Lucia
PJ7	St Maarten
PJ5*	St Maarten, Saba, St Eus
FS, TO	St Martin
CY9	St Paul Is
PP PYØP	St Peter & St Paul Rocks
FP	St Pierre & Miquelon
J8	St Vincent
ST	Sudan
PZ	Surinam
JW	Svalbard
KH8	Swain's Island
3DA	Swaziland
SA-SM 7S, 8S	Sweden
HB	Switzerland
YK	Syria
BU- BX	Taiwan
EY	Tajikistan
CN2*	Tangier
5H, 5I	Tanzania
H4Ø	Temotu Province
HS, E2	Thailand
4W	Timor Leste
5V	Togo
ZK3	Tokelau Is
A3	Tonga
PP-PYØT	Trindade & Martin Vaz Is
9Y, 9Z	Trinidad & Tobago
ZD9	Tristan da Cunha, Gough Is
FT/T, TO	Tromelin
3V	Tunisia
TA, TC	Turkey
EZ	Turkmenistan
VP5	Turks & Caicos Is
T2	Tuvalu
5X	Uganda
UR-UZ EM, EZØ	Ukraine
4U_UN	UN HQ
A6	United Arab Emirates
K,W,N,A A-AK	United States
CV- CX	Uruguay
UJ-UM	Uzbekistan
YJ	Vanuatu
HV	Vatican
YV-YY 4M	Venezuela
3W, XV	Vietnam
KP2	Virgin Is
VP2V	Virgin Is, British
KH9	Wake Is
GW, GC	Wales
FW	Wallis & Futuna Is
S0	Western Sahara
VK9W	Willis Is
7O	Yemen
9I, 9J	Zambia
VQ1*	Zanzibar
Z2	Zimbabwe

1A SMO Malta
1M* Minerva Reef
1S Spratly Is
3A Monaco
3B6, 7 Agalega & St Brandon
3B8 Mauritius
3B9 Rodriguez Is
3C Equatorial Guinea
3CØ Annobon Is
3D2 Conway Reef
3D2 Fiji
3D2 Rotuma
3DA Swaziland
3V Tunisia
3W, XV Vietnam
3X Guinea
3Y Bouvet
3Y Peter I Is
4J, 4K Azerbaijan
4L Georgia
4O Montenegro
4S Sri Lanka
4U_ITU ITU Geneva
4U_UN UN HQ
4W Timor Leste
4X, 4V Israel
5A Libya
5B, C4, P3 Cyprus
5H, 5I Tanzania
5N Nigeria
5R Madagascar
5T Mauritania
5U Niger
5V Togo
5W Samoa
5X Uganda
5Y, 5Z Kenya
6V, 6W Senegal
6Y Jamaica
7O Yemen
7P Lesotho
7Q Malawi
7T-7Y Algeria
8P Barbados
8Q Maldives
8R Guyana
9A Croatia
9G Ghana
9H Malta
9I, 9J Zambia
9K Kuwait
9L Sierra Leone
9M2, 4 West Malaysia
9M6, 8 East Malaysia
9N Nepal
9Q- 9T Dem Rep Congo (Zaire)
9U Burundi
9V Singapore
9X Rwanda
9Y, 9Z Trinidad & Tobago
A2 Botswana
A3 Tonga
A4 Oman
A5 Bhutan
A6 United Arab Emirates
A7 Qatar
A9 Bahrain
B China
AP Pakistan
BS7 Scarborough Reef
BU- BX Taiwan
BV9P Pratas Is
C2 Nauru
C3 Andorra
C5 Gambia
C6 Bahamas
C8, C9 Mozambique
CA- CE Chile
CEØ San Felix
CEØ Easter Is
CEØ Juan Fernandez
CE9, KC4 Antarctica
CM, CO Cuba
CN Morocco
CN2* Tangier
CP Bolivia
CT Portugal
CT3 Madeira Is
CU Azores
CV- CX Uruguay
CYØ Sable Is
CY9 St Paul Is
D2, D3 Angola
D4 Cape Verde
D6 Comoros
DA- DR Germany
DU-DZ 4D-4I Philippines
E3 Eritrea
E4 Palestine
E5 North Cook Is
E5 South Cook Is
E6 Niue
E7 Bosnia-Hercegovina
EA- EH Spain
EA6-EH6 Balearic Is
EA8-EH8 Canary Is
EA9-EH9 Ceuta & Melilla
EI, EJ Ireland
EK Armenia
EL Liberia
EP, EQ Iran
ER Moldova
ES Estonia
ET Ethiopia
EU-EW Belarus
EX Kyrgyzstan
EY Tajikistan
EZ Turkmenistan
F France
FG, TO Guadeloupe
FH, TO Mayotte
FJ- TO St Barthelemy
FK, TX Chesterfield Is
FK, TX New Caledonia
FM, TO Martinique
FO, TO French Polynesia
FO, TO Austral Is
FO, TX Clipperton Is
FO, TX Marquesas Is
FP St Pierre & Miquelon
FR, TO Reunion
FS, TO St Martin
FT/G Glorioso Is
FT/J, E, TO Juan de Nova, Europa
FT/T, TO Tromelin
FT/W Crozet
FT/X Kerguelen Is
FT/Z Amsterdam & St Paul Is
FW Wallis & Futuna Is
FY French Guiana
G, GX, M England
GD, GT Isle of Man
GI, GN No Ireland
GJ, GH Jersey
GM, GS Scotland
GU, GP Guernsey
GW, GC Wales
H4 Solomon Is
H4Ø Temotu Province
HA, HG Hungary
HB Switzerland
HBØ Liechtenstein
HC, HD Ecuador
HC8, HD8 Galapagos Is
HH Haiti
HI Dominican Rep
HJ,HK, 5J, 5K Colombia
HKØ Malpelo Is
HKØ San Andres & Providencia
HKØ* Bajo Nuevo
HL, 6K-6N Republic of Korea
HO, HP Panama
HQ, HR Honduras
HS, E2 Thailand
HV Vatican
HZ Saudi Arabia
I Italy
ISØ, IMØ Sardinia
J2 Djibouti
J3 Grenada
J5 Guinea-Bissau
J6 St Lucia
J7 Dominica
J8 St Vincent
JA-JS, 7J-7N Japan
JD1 Minami Torishima
JD1 Ogasawara
JT- JV Mongolia

International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.



Callsign / File Num	Status	Station Class	Licensee Name	Xmtr City	Freq	Ch				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.215	7				
KSA357	Active	Mobile	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.215	I				UP 7
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.230	8				
KNFX766	Active	Base	AMTRAK	CHICAGO	160.230	I				
KSD441	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.230	I				
KSD441 / 0001747070	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.230	I				
KTD335	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.230	I				
KTD335 / 0001728627	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.230	I				CSX+IHB+UP+AMTRAK 8
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.230	I				
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.230	I				
WPRK560	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.230	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	ALSIP	160.230	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	BEDFORD PARK	160.230	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	BRIDGEVIEW	160.230	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	CHICAGO RIDGE	160.230	I				
WPZI679	Active	Base	CSX Transportation Inc	CHICAGO	160.230	I				
KNFX766	Active	Base	AMTRAK	CHICAGO	160.245	9				AMTRAK 9 disp/patch/Chinatown
KSD441	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.275	11				
KSD441 / 0001747070	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.275	I				
WPRL451	Active	Mobile	CSX INTERMODAL	BEDFORD PARK	160.275	I				CSX INT 11
WPRL451	Active	Mobile Relay	CSX INTERMODAL	BEDFORD PARK	160.275	I				
KTD335	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.290	12				
KTD335 / 0001728627	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.290	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	ALSIP	160.290	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	BEDFORD PARK	160.290	I				CSX 12
WPRK561	Active	Base	CSX TRANSPORTATION INC	BRIDGEVIEW	160.290	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	CHICAGO RIDGE	160.290	I				
WPZI679	Active	Base	CSX Transportation Inc	CHICAGO	160.290	I				
KNFX766	Active	Base	AMTRAK	CHICAGO	160.305	13				
KVU343	Active	Base	AMTRAK	CHICAGO	160.305	I				AMTRAK 13
WPCT556	Active	Base	AMTRAK	CHICAGO	160.305	I				
KSD441	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.320	14				
KSD441 / 0001747070	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.320	I				
KTD335	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.320	I				CSX 14
KTD335 / 0001728627	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.320	I				
WPRK560	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.320	I				
WPZI679	Active	Base	CSX Transportation Inc	CHICAGO	160.320	I				
KNDS965	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.335	15				
KNDS965	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.335	I				BN 15
KNDV569	Active	Base	The Burlington Northern and Santa Fe Railway Co	CICERO	160.335	I				
KNDV569	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	CICERO	160.335	I				
KCN544	Active	Mobile Relay	AMTRAK	CHICAGO	160.365	17				NS+AMTRAK 17
WNUY884	Active	Mobile Relay	Norfolk Southern Railway Company	CHICAGO	160.365	I				

Sort by Freq/Callsign/Licensee

Callsign / File Num	Status	Station Class	Licensee Name	Xmtr City	Freq	Ch				
KFR786	Active	Base	BELT RADIO COMMUNICATIONS INC	CHICAGO	160.380	18				
KGV765 / 0001792630	Pending	Base	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.380	I				IHB+BN 18
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.380	I				
WPEQ606	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	Hodgkins	160.380	I				
KTD335	Active	Mobile	CSX TRANSPORTATION INC	CHICAGO	160.395	19				
KTD335 / 0001728627	Pending	Mobile	CSX TRANSPORTATION INC	CHICAGO	160.395	I				CSX+SOO+AMTRAK 19
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.395	I				
WPTX382	Active	Mobile	AMTRAK	CHICAGO	160.395	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.410	20				IHB 20
WQL816	Active	Mobile Relay	The Burlington Northern and Santa Fe Railway Co	DOWNERS GR	160.425	21				BN 21
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.440	22				
KNFX259	Active	Base	Norfolk Southern Railway Company	CHICAGO	160.440	I				
KYN285	Active	Base	INDIANA HARBOR BELT RAILROAD	CHICAGO RIDGE	160.440	I				IHB+NS+PENN+METRA 22
WNKX352	Active	Base	Norfolk Southern Railway Company	CHICAGO	160.440	I				
WNQU573	Active	Base	METRA	CHICAGO	160.440	I				
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.440	I				
KBY513	Active	Base	UNION PACIFIC RAILROAD COMPANY	DES PLAINES	160.455	23				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.455	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.455	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.455	I				UP+BELT 23
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.455	I				
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.455	I				
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.455	I				
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.470	24				SOO 24
KLR331	Active	Base	Norfolk Southern Railway Company	CHICAGO	160.485	25				
KLR331	Active	Mobile	Norfolk Southern Railway Company	CHICAGO	160.485	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.485	I				UP/SOO/NS 25
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.485	I				
WPYE856	Active	Base	Soo System Radio Communications Corporation	Bensenville	160.485	I				
WPYE856	Active	Mobile	Soo System Radio Communications Corporation	Bensenville	160.485	I				
KFR786	Active	Base	BELT RADIO COMMUNICATIONS INC	CHICAGO	160.500	26				
KGV765 / 0001792630	Pending	Base	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.500	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.500	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.500	I				IHB+UP+SOO+BN 26
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.500	I				
WPEQ606	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	Hodgkins	160.500	I				
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.500	I				
KVK390	Active	Base	Norfolk Southern Railway Company	CHICAGO	160.515	27				
KVK390	Active	Mobile	Norfolk Southern Railway Company	CHICAGO	160.515	I				NS+SOO 27
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.515	I				
WNMY439	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.530	28				GT 28
WNMY441	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.530	I				
WNIA323	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.545	29				
WNKX352	Active	Base	Norfolk Southern Railway Company	CHICAGO	160.545	I				NS+PENN 29

Callsign / File Num	Status	Station Class	Licensee Name	Xmtr City	Freq	Ch				
WNKX352	Active	Mobile	Norfolk Southern Railway Company	CHICAGO	160.545	I				
WNKX352	Active	Mobile Relay	Norfolk Southern Railway Company	CHICAGO	160.545	I				
WNIA323	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.560	30				PENN 30
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.575	31				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.575	I				
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.575	I				UP 31
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.575	I				
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.575	I				
WPPC243	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.575	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.590	32				
KNHJ864	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.590	I				
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.590	I				GT+IHB+SOO+UP 32
WNMY439	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.590	I				
WNMY441	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.590	I				
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.590	I				
KNDV569	Active	Mobile Relay	The Burlington Northern and Santa Fe Railway Co	CICERO	160.605	33				
KWS432	Active	Base	The Burlington Northern and Santa Fe Railway Co	CICERO	160.605	I				
WNBG753	Active	Base	METRA	CHICAGO	160.605	I				
WNBG753	Active	Mobile	METRA	CHICAGO	160.605	I				
WNJS224	Active	Base	METRA	CHICAGO	160.605	I				
WNJS224	Active	Mobile	METRA	CHICAGO	160.605	I				METRA+BN 33
WPFZ208	Active	Base	METRA	CHICAGO	160.605	I				
WPWX313	Active	Base	METRA	Chicago	160.605	I				
WPWX313	Active	Base	METRA	Wooddale	160.605	I				
WPWX313	Active	Mobile	METRA	Chicago	160.605	I				
WNKX352	Active	Base	Norfolk Southern Railway Company	CHICAGO	160.620	34				
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.620	I				
WPYE856	Active	Base	Soo System Radio Communications Corporation	Bensenville	160.620	I				SOO+NS 34
WPYE856	Active	Mobile	Soo System Radio Communications Corporation	Bensenville	160.620	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.650	36				
KNFX766	Active	Base	AMTRAK	CHICAGO	160.650	I				
KSA569	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.650	I				
KSE996	Active	Base	The Burlington Northern and Santa Fe Railway Co	HODGKINS	160.650	I				BN+BELT+AMTRAK 36
KSF754	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.650	I				
WNPO573	Active	Base	The Burlington Northern and Santa Fe Railway Co	LEMONT	160.650	I				
WPFK523	Active	Base	The Burlington Northern and Santa Fe Railway Co	HODGKINS	160.650	I				
WPFK523	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	HODGKINS	160.650	I				
WPGQ627	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	Hodgkins	160.650	I				
WPYE978	Active	Base	The Burlington Northern and Santa Fe Railway Co	Hodgkins	160.650	I				
KFW519	Active	Base	METRA	CHICAGO	160.680	38				METRA 38
KFW519	Active	Mobile Relay	METRA	CHICAGO	160.680	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.695	39				IHB 39
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.710	40				UP 40

Callsign / File Num	Status	Station Class	Licensee Name	Xmtr City	Freq	Ch				
KNFX766	Active	Base	AMTRAK	CHICAGO	160.740	42				
KRC498	Active	Base	AMTRAK	CHICAGO	160.740	I				AMTRAK 42
WNHL632	Active	Base	CHICAGO CENTRAL & PACIFIC RAILROAD	CICERO	160.755	43				
WNLF924	Active	Base	CHICAGO CENTRAL & PACIFIC RAILROAD CO	CICERO	160.755	I				CHCEN+PENN 43
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.755	I				
KBY513	Active	Base	UNION PACIFIC RAILROAD COMPANY	DES PLAINES	160.770	44				
KFW518	Active	Base	METRA	CHICAGO	160.770	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.770	I				
KYN285	Active	Base	INDIANA HARBOR BELT RAILROAD	CHICAGO RIDGE	160.770	I				SOO+IHB+UP+METRA 44
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.770	I				
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.770	I				
WPPA494	Active	Base	Soo Systems Radio Communications Corporation	CHICAGO	160.770	I				
WPYE856	Active	Base	Soo System Radio Communications Corporation	Bensenville	160.770	I				
WPYE856	Active	Mobile	Soo System Radio Communications Corporation	Bensenville	160.770	I				
KSD441	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.785	45				
KSD441 / 0001747070	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.785	I				
KSF754	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.785	I				
KTD335	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.785	I				
KTD335 / 0001728627	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.785	I				CSX+BN 45
KUS514	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.785	I				
WPRK560	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.785	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	ALSIP	160.785	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	BEDFORD PARK	160.785	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	BRIDGEVIEW	160.785	I				
WPRK561	Active	Base	CSX TRANSPORTATION INC	CHICAGO RIDGE	160.785	I				
WPZI679	Active	Base	CSX Transportation Inc	CHICAGO	160.785	I				
KGU651	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.800	46				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.800	I				
KNFX766	Active	Base	AMTRAK	CHICAGO	160.800	I				
KWS432	Active	Base	The Burlington Northern and Santa Fe Railway Co	CICERO	160.800	I				
WNIA323	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.800	I				PENN+IHB+BN+NS+AMTRAK 46
WNKX352	Active	Base	Norfolk Southern Railway Company	CHICAGO	160.800	I				
WNQU482	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.800	I				
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.800	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.815	47				UP 47
KVM489	Active	Base/Int	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.830	48				
KVM489	Active	Mobile Relay	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.830	I				BN 48
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.845	49				
KNHJ864	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.845	I				
WNMY439	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.845	I				GTW+IHB 49
WNMY441	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.845	I				
WNIA323	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.860	50				PENN 50
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.860	I				

Callsign / File Num	Status	Station Class	Licensee Name	Xmtr City	Freq	Ch				
KSD441	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.875	51				
KSD441	Active	Mobile	CSX TRANSPORTATION INC	CHICAGO	160.875	I				
KSD441 / 0001747070	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.875	I				
KSD441 / 0001747070	Pending	Mobile	CSX TRANSPORTATION INC	CHICAGO	160.875	I				CSX 51
KTD335	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.875	I				
KTD335 / 0001728627	Pending	Base	CSX TRANSPORTATION INC	CHICAGO	160.875	I				
KUS514	Active	Base	CSX TRANSPORTATION INC	CHICAGO	160.875	I				
KBY513	Active	Base	UNION PACIFIC RAILROAD COMPANY	DES PLAINES	160.890	52				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.890	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.890	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.890	I				UP+IHB+PENN 52
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.890	I				
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.890	I				
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	160.890	I				
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.890	I				
WNWV511	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.905	53				GT 53
/ 0001704427	Pending	Base	ILLINOIS CENTRAL RAILROAD CO	CHICAGO	160.920	54				
/ 0001704427	Pending	Mobile	ILLINOIS CENTRAL RAILROAD CO	CHICAGO	160.920	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.920	I				
KLE810	Active	Base	ILLINOIS CENTRAL GULF RAILROAD COMPANY	CHICAGO	160.920	I				
KNFX766	Active	Base	NATIONAL RAILROAD PASSENGER CORP	CHICAGO	160.920	I				ICG+IHB 54
KRR917	Active	Base	ILLINOIS CENTRAL GULF RAILROAD CO	CHICAGO	160.920	I				
KRR918	Active	Base	ILLINOIS CENTRAL GULF RAILROAD CO	CHICAGO	160.920	I				
WNIZ346	Active	Base	ILLINOIS CENTRAL GULF RAILROAD CO	CHICAGO	160.920	I				
WNJY220	Active	Base	ILLINOIS CENTRAL GULF RAILROAD CO	STICKNEY	160.920	I				
WQL816	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	DOWNERS GR	160.935	55				BN 55
WNMY439	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.950	56				
WNMY441	Active	Base	GRAND TRUNK WESTERN RAILROAD	CHICAGO	160.950	I				GTW 56
KGV765 / 0001792630	Pending	Base	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.965	57				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.965	I				
KSE225	Active	Base	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	160.965	I				IHB+BN 57
WPEQ606	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	DOWNERS GR	160.965	I				
KJW633	Active	Base	INDIANA HARBOR BELT RAILROAD	FRANKLIN PARK	160.980	58				
KQR394	Active	Base	INDIANA HARBOR BELT RAILROAD	SUMMIT	160.980	I				
KYN285	Active	Base	INDIANA HARBOR BELT RAILROAD	CHICAGO RIDGE	160.980	I				IHB+SOO+PENN+UP 58
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	160.980	I				
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	160.980	I				
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	160.980	I				
KSA569	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	160.995	59				
WPFK523	Active	Base	The Burlington Northern and Santa Fe Railway Co	HODGKINS	160.995	I				BN 59
WPFK523	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	HODGKINS	160.995	I				
WPYE978	Active	Base	The Burlington Northern and Santa Fe Railway Co	Hodgkins	160.995	I				
WPGQ627	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	Hodgkins	161.010	60				BN 60

Callsign / File Num	Status	Station Class	Licensee Name	Xmtr City	Freq	Ch				
WNMV660	Active	Base	METRA	CHICAGO	161.025	61				
WNUI971	Active	Base	METRA	CHICAGO	161.025	I				
WPWY559	Active	Base	METRA	CHICAGO	161.025	I				METRA 61
WPWY559	Active	Mobile	METRA	CHICAGO	161.025	I				
KBY513	Active	Base	UNION PACIFIC RAILROAD COMPANY	DES PLAINES	161.040	62				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	161.040	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	161.040	I				
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	161.040	I				UP 62
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	161.040	I				
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	161.040	I				
KGU651	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	161.055	63				PENN 63
KGU651	Active	Mobile	PENNSYLVANIA LINES LLC	CHICAGO	161.055	I				
KGU651	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	161.070	64				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	161.070	I				
KTI613	Active	Base	INDIANA HARBOR BELT RAILROAD	FRANKLIN PARK	161.070	I				
KYN285	Active	Base	INDIANA HARBOR BELT RAILROAD	CHICAGO RIDGE	161.070	I				
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	161.070	I				SOO+IHB+PENN+UP 64
WNIA323	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	161.070	I				
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	161.070	I				
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	161.070	I				
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	161.085	I				
WPPA494	Active	Base	Soo Systems Radio Communications Corporation	CHICAGO	161.085	I				
WPYE856	Active	Base	Soo System Radio Communications Corporation	Bensenville	161.085	I				
WPYE856	Active	Mobile	Soo System Radio Communications Corporation	Bensenville	161.085	I				
KNDS965	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	161.100	66				
KNDS965	Active	Mobile	The Burlington Northern and Santa Fe Railway Co	CHICAGO	161.100	I				
KNDV569	Active	Base	The Burlington Northern and Santa Fe Railway Co	CICERO	161.100	I				
KNFX766	Active	Base	AMTRAK	CHICAGO	161.100	I				
KSA993	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	161.100	I				BN+PENN+AMTRAK 66
WNAE990	Active	Base	The Burlington Northern and Santa Fe Railway Co	DOWNERS GR	161.100	I				
WNXK890	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	161.100	I				
WPGP395	Active	Base	PENNSYLVANIA LINES LLC	CHICAGO	161.100	I				
WPUX596	Active	Base	The Burlington Northern and Santa Fe Railway Co	NAPERVILLE	161.100	I				
WPAS786	Active	Base	Soo Systems Radio Communications Corporation	SCHILLER PARK	161.145	69				
WPAS786	Active	Mobile	Soo Systems Radio Communications Corporation	SCHILLER PARK	161.145	I				SOO 69
WPMZ858	Active	Base	Soo Systems Radio Communications Corporation	FRANKLIN PARK	161.145	I				
KNDV569	Active	Base	The Burlington Northern and Santa Fe Railway Co	CICERO	161.160	70				
KSA993	Active	Base	The Burlington Northern and Santa Fe Railway Co	CHICAGO	161.160	I				BN 70
WNAE990	Active	Base	The Burlington Northern and Santa Fe Railway Co	DOWNERS GR	161.160	I				
KBY513	Active	Base	UNION PACIFIC RAILROAD COMPANY	DES PLAINES	161.175	71				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	161.175	I				
KSA357	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	161.175	I				UP 71
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	161.175	I				
WNDL300	Active	Base	UNION PACIFIC RAILROAD COMPANY	NORTHLAKE	161.175	I				
WNMM986	Active	Base	UNION PACIFIC RAILROAD COMPANY	CHICAGO	161.175	I				
/ 0001704427	Pending	Base	ILLINOIS CENTRAL RAILROAD CO	CHICAGO	161.190	72				
/ 0001704427	Pending	Mobile	ILLINOIS CENTRAL RAILROAD CO	CHICAGO	161.190	I				
KGV765 / 0001792630	Pending	Mobile	BELT RADIO COMMUNICATIONS INC	BEDFORD PARK	161.190	I				
KLE810	Active	Base	ILLINOIS CENTRAL GULF RAILROAD COMPANY	CHICAGO	161.190	I				

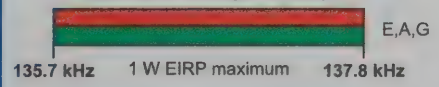
US Amateur Radio Bands

US AMATEUR POWER LIMITS — FCC 97.313 An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

ARRL The national association for AMATEUR RADIO

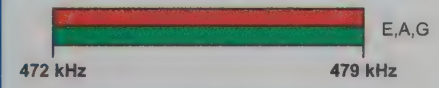
Amateurs wishing to operate on either 2,200 or 630 meters must first register with the Utilities Technology Council online at **https://utc.org/plc-database-amateur-notification-process/.** You need only register once for each band.

2,200 Meters (135 kHz)



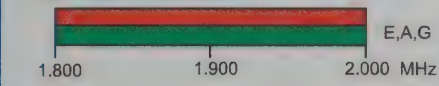
630 Meters (472 kHz)

5 W EIRP maximum, except in Alaska within 496 miles of Russia where the power limit is 1 W EIRP.

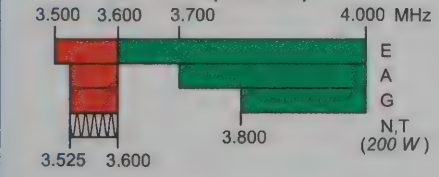


160 Meters (1.8 MHz)

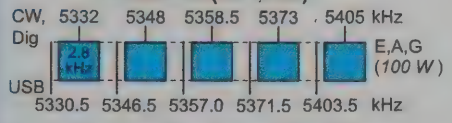
Avoid interference to radiolocation operations from 1.900 to 2.000 MHz



80 Meters (3.5 MHz)

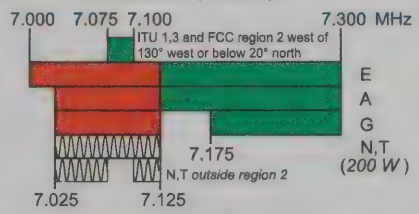


60 Meters (5.3 MHz)



General, Advanced, and Amateur Extra licensees may operate on these five channels on a secondary basis with a maximum effective radiated power (ERP) of 100 W PEP relative to a half-wave dipole. Permitted operating modes include upper sideband voice (USB), CW, RTTY, PSK31 and other digital modes such as PACTOR III. Only one signal at a time is permitted on any channel.

40 Meters (7 MHz)

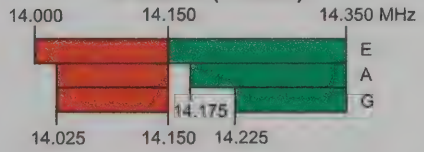


See Sections 97.305(c), 97.307(f)(11) and 97.301(e).These exemptions do not apply to stations in the continental US.

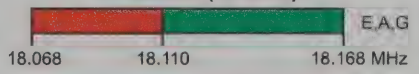
30 Meters (10.1 MHz)

Avoid interference to fixed services outside the US.

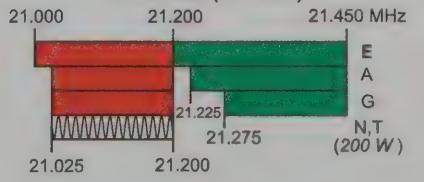
20 Meters (14 MHz)



17 Meters (18 MHz)

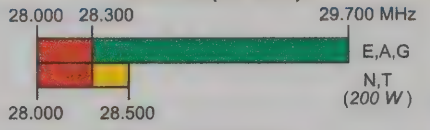


15 Meters (21 MHz)

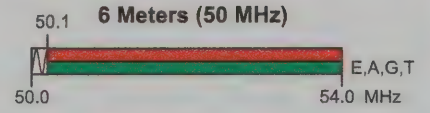


12 Meters (24 MHz)

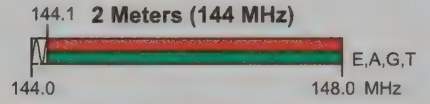
10 Meters (28 MHz)



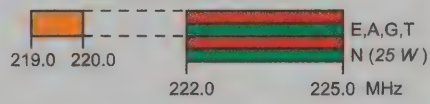
6 Meters (50 MHz)



2 Meters (144 MHz)



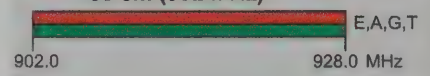
1.25 Meters (222 MHz)



*Geographical and power restrictions may apply to all bands above 420 MHz. See *The ARRL Operating Manual* for information about your area.

70 cm (420 MHz)*

33 cm (902 MHz)*



23 cm (1240 MHz)*

All licensees except Novices are authorized all modes on the following frequencies:

2300-2310 MHz	10.0-10.5 GHz ‡	122.25-123.0 GHz
2390-2450 MHz	24.0-24.25 GHz	134-141 GHz
3300-3500 MHz	47.0-47.2 GHz	241-250 GHz
5650-5925 MHz	76.0-81.0 GHz	All above 275 GHz

‡ No pulse emissions

KEY

Note:
CW operation is permitted throughout all amateur bands

MCW is authorized above 50.1 MHz except for 144.0-144.1 and 219-220 MHz

Test transmissions are authorized above 30 MHz, except for 219-220 MHz

= RTTY and data
= phone and image
= CW only
= SSB phone
= USB phone, CW, RTTY, and data
= Fixed digital message forwarding systems *only*

E = Amateur Extra
A = Advanced
G = General
T = Technician
N = Novice

See *ARRLWeb* at *www.arrl.org* for detailed band plans.

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Indiana

Legend

- Coverage Area
- Not Covered

Miles

0 10 20 40 60 80

Illinois

Legend

- Coverage Area
- Not Covered
- Oceans, Lakes and Rivers

Miles

0 12.5 25 50 75 100

Lower Michigan

Legend

- Coverage Area
- Canada
- Not Covered
- Oceans, Lakes and Rivers

Miles
0 15 30 60

Wisconsin

Legend

- Coverage Area
- Not Covered
- Oceans, Lakes and Rivers

Miles

0 10 20 40 60 80

US CB CHANNEL FREQUENCIES

1	26.965
2	26.975
3	26.985
4	27.005
5	27.015
6	27.025
7	27.035
8	27.055
9	27.065
10	27.075
11	27.085
12	27.105
13	27.115
14	27.125
15	27.135
16	27.155
17	27.165
18	27.175
19	27.185
20	27.205
21	27.215
22	27.225
23	27.255
24	27.235
25	27.245
26	27.265
27	27.275
28	27.285
29	27.295
30	27.305
31	27.315
32	27.325
33	27.335
34	27.345
35	27.355
36	27.365
37	27.375
38	27.385
39	27.395
40	27.405

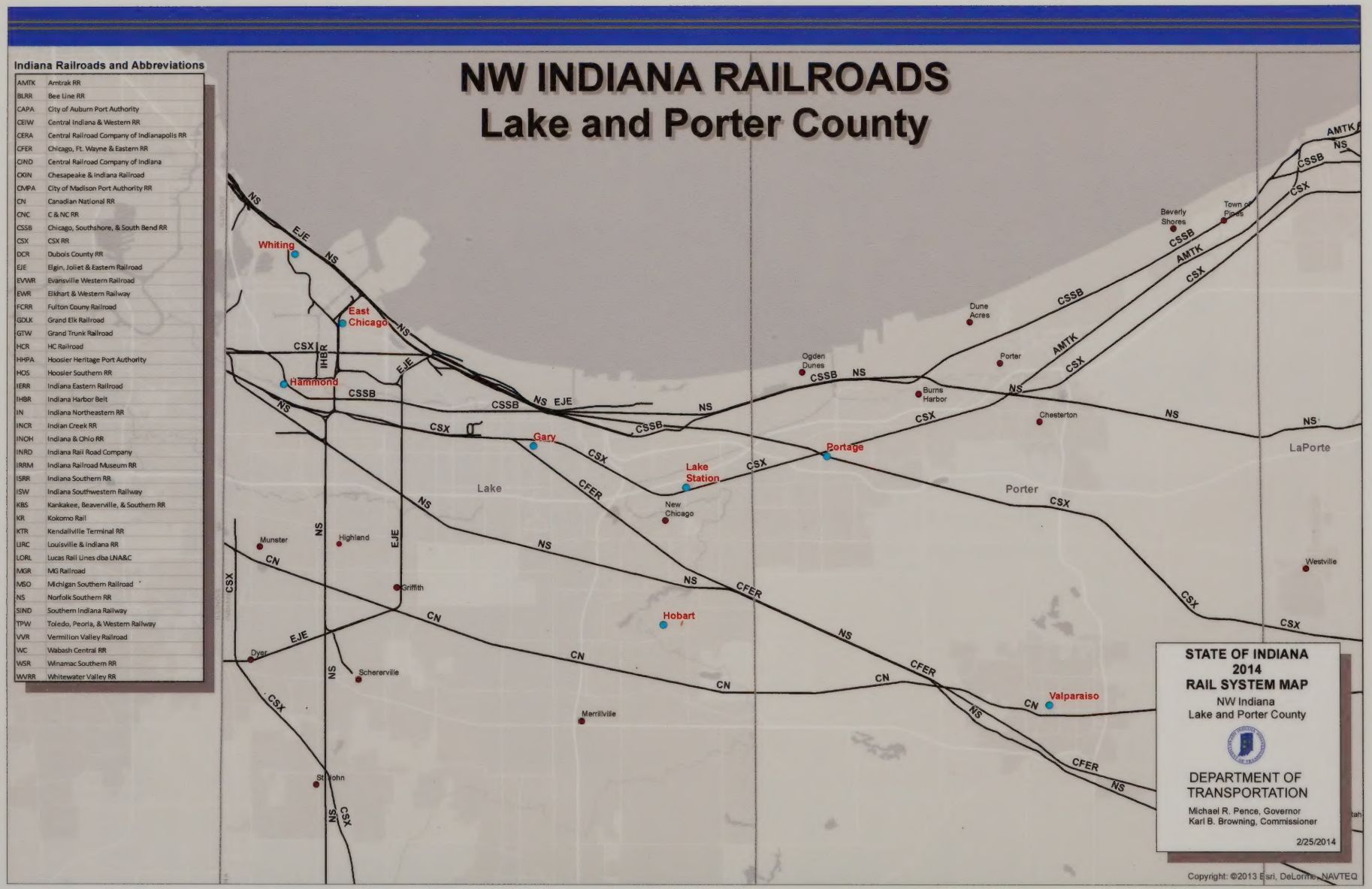
Channel Number	Ship Transmit MHz	Ship Receive MHz	Use
01A	156.050	156.050	Port Operations and Commercial, VTS. Available only in New Orleans / Lower Mississippi area.
05A	156.250	156.250	Port Operations or VTS in the Houston, New Orleans and Seattle areas.
06	156.300	156.300	Intership Safety
07A	156.350	156.350	Commercial
08	156.400	156.400	Commercial (Intership only)
09	156.450	156.450	Boater Calling. Commercial and Non-Commercial.
10	156.500	156.500	Commercial
11	156.550	156.550	Commercial. VTS in selected areas.
12	156.600	156.600	Port Operations. VTS in selected areas.
13	156.650	156.650	Intership Navigation Safety (Bridge-to-bridge). Ships >20m length maintain a listening watch on this in US waters.
14	156.700	156.700	Port Operations. VTS in selected areas.
15	–	156.750	Environmental (Receive only). Used by Class C EPIRBs.
16	156.800	156.800	International Distress, Safety and Calling. Ships req'd to carry radio, USCG, coast stations maintain listening watch.
17	156.850	156.850	State & local government maritime control
18A	156.900	156.900	Commercial
19A	156.950	156.950	Commercial
20	157.000	161.600	Port Operations (duplex)
20A	157.000	157.000	Port Operations
21A	157.050	157.050	U.S. Coast Guard only
22A	157.100	157.100	Coast Guard Liaison and Maritime Safety Information Broadcasts. Broadcasts announced on channel 16.
23A	157.150	157.150	U.S. Coast Guard only
24	157.200	161.800	Public Correspondence (Marine Operator)
25	157.250	161.850	Public Correspondence (Marine Operator)
26	157.300	161.900	Public Correspondence (Marine Operator)
27	157.350	161.950	Public Correspondence (Marine Operator)
28	157.400	162.000	Public Correspondence (Marine Operator)
63A	156.175	156.175	Port Operations and Commercial, VTS. Available only in New Orleans / Lower Mississippi area.
65A	156.275	156.275	Port Operations
66A	156.325	156.325	Port Operations
67	156.375	156.375	Commercial. Used for Bridge-to-bridge communications in lower Mississippi River. Intership only.
68	156.425	156.425	Non-Commercial
69	156.475	156.475	Non-Commercial
70	156.525	156.525	Digital Selective Calling (voice communications not allowed)
71	156.575	156.575	Non-Commercial
72	156.625	156.625	Non-Commercial (Intership only)
73	156.675	156.675	Port Operations
74	156.725	156.725	Port Operations
77	156.875	156.875	Port Operations (Intership only)
78A	156.925	156.925	Non-Commercial
79A	156.975	156.975	Commercial. Non-Commercial in Great Lakes only
80A	157.025	157.025	Commercial. Non-Commercial in Great Lakes only
81A	157.075	157.075	U.S. Government only - Environmental protection operations.
82A	157.125	157.125	U.S. Government only
83A	157.175	157.175	U.S. Coast Guard only
84	157.225	161.825	Public Correspondence (Marine Operator)
85	157.275	161.875	Public Correspondence (Marine Operator)
86	157.325	161.925	Public Correspondence (Marine Operator)
87	157.375	157.375	Public Correspondence (Marine Operator)
88A	157.425	157.425	Commercial, Intership only.
AIS 1	161.975	161.975	Automatic Identification System (AIS)
AIS 2	162.025	162.025	Automatic Identification System (AIS)

APPENDIX 1. SUMMARY OF FREQUENCY BANDS SUPPORTING AVIATION

FREQUENCY BAND		AVIATION SPECTRUM REQUIREMENT	GOVERNMENT. ALLOCATION
90-110	kHz	LORAN C Navigation System	Radio Navigation
190-285	kHz	Nondirectional Beacon	Aeronautical Radionavigation
285-325	kHz	Nondirectional Beacon	Aeronautical Radionavigation
325-405	kHz	Nondirectional Beacon	Aeronautical Radionavigation
405-415	kHz	Nondirectional Beacon	Radionavigation
415-435	kHz	Nondirectional Beacon	Aeronautical Radionavigation
510-535	kHz	Nondirectional Beacon	Aeronautical Radionavigation
2,100-28,000	kHz	High Frequency Communi-cations (HF, HFDL)	Aeronautical Mobile (Route)
75	MHz	NAVAID (ILS Marker Beacon)	Aeronautical Radionavigation
108.0-117.975	MHz	NAVAID (VOR, ILS Localizer, Scat-1)	Aeronautical Radionavigation
117.975-121.9375	MHz	VHF Air/Gnd Communications	Aeronautical Mobile (R)
123.0875-128-8125	MHz	VHF Air/Gnd Communications	Aeronautical Mobile (R)
132.0125-137.0	MHz	VHF Air/Gnd Communications	Aeronautical Mobile (R)
162.0-174.0	MHz	Fixed, Mobile Communications (Land Mobile)	Fixed, Mobile
225.0-328.6	MHz	UHF Air/Gnd Communications (DOD ATC)	Fixed, Mobile
328.6-335.4	MHz	NAVAID (ILS Glide Slope)	Aeronautical Radionavigation
335.4-399.9	MHz	UHF Air/Gnd Communications (DOD ATC)	Fixed, Mobile
406.0-406.1	MHz	Satellite Emergency Position Indication Beacon	Mobile-Satellite
406.1-420.0	MHz	Fixed, Mobile Communications (Land Mobile)	Fixed, Mobile
932.0-935.0	MHz	Fixed Communications	Fixed
941.0-944.0	MHz	Fixed Communications	Fixed
960.0-1215.0	MHz	NAVAID (TACAN, DME, GPS L5 (1176.45)	Aeronautical Radionavigation
1030.0	MHz	Radar Beacon, TCAS, Mode S	Aeronautical Radionavigation
1090.0	MHz	Radar Beacon, TCAS, Mode S	Aeronautical Radionavigation
1227.6	MHz	GPS L2 (bandwidth ± 10 MHz)	Radionavigation-Satellite
1215-1300	MHz	Air Route Surveillance Radar	Radiolocation
1300-1370	MHz	Air Route Surveillance Radar	Aeronautical Radionavigation
1370-1390	MHz	Air Route Surveillance Radar	Radiolocation
1435-1535	MHz	Aeronautical Telemetry	Mobile
1544-1545	MHz	Emergency Mobile Satellite Communications	Mobile-Satellite
1545-1559	MHz	Aeronautical Mobile Satellite (Downlink)	Aeronautical Mobile-Satellite (R)
1559-1610	MHz	GPS L1, (1575.72 MHz), GLONASS	Aeronautical Radionavigation Radionavigation-Satellite
1645.5-1646.5	MHz	Emergency Mobile Satellite Communications	Mobile-Satellite
1646.6-1660.5	MHz	Aeronautical Mobile Satellite (Uplink)	Aeronautical Mobile-Satellite (R)
1710-1850	MHz	Low Density Microwave Link	Fixed

APPENDIX 1. SUMMARY OF FREQUENCY BANDS SUPPORTING AVIATION (CONTINUED)

FREQUENCY BAND	AVIATION SPECTRUM REQUIREMENT	GOVERNMENT. ALLOCATION
2700-2900 MHz	Airport Surveillance Radar, Weather Radar*	Aeronautical Radionavigation
2900-3000 MHz	Airport Surveillance Radar, Weather Radar	Radiolocation
3700-4200 MHz	ANICS (Commercial Satellite Downlink)	None (Leased System)
4200-4400 MHz	Airborne Radio Altimeter	Aeronautical Radionavigation
5000-5250 MHz	NAVAID (Microwave Landing System)	Aeronautical Radionavigation
5350-5460 MHz	Airborne Radar and Associated Airborne Beacon	Aeronautical Radionavigation
5460-5470 MHz	Airborne Radar and Associated Airborne Beacon	Radionavigation
5600-5650 MHz	Terminal Doppler Weather Radar	Meteorological Aids
5925-6425 MHz	ANICS (Commercial Satellite Uplink)	None (Leased system)
7125-7250 MHz	Radio Communications Link	Fixed
7250-7300 MHz	Radio Communications Link	Fixed
7300-7900 MHz	Radio Communications Link	Fixed
7900-8025 MHz	Radio Communications Link	Fixed
8025-8500 MHz	Radio Communications Link	Fixed
8750-8850 MHz	Airborne Doppler Radar	Radiolocation
9000-9200 MHz	Military Precision Approach Radar	Aeronautical Radionavigation
9300-9500 MHz	Airborne Radar and Associated Airborne Beacon	Radio Navigation
11.7-12.2 GHz	FAATSAT (Commercial Satellite Downlink)	Fixed (Leased System)
13.25-13.40 GHz	Airborne Doppler Radar	Aeronautical Radionavigation
14.0-14.5 GHz	FAATSAT (Commercial Satellite Uplink)	Fixed (Leased System)
14.4-14.5 GHz	Television (Video) Microwave Link	Fixed
14.50-14.7145 GHz	Television (Video) Microwave Link	Fixed
14.7145-215.3165 GHz	Television (Video) Microwave Link	Fixed
15.1365-15.350 GHz	Television (Video) Microwave Link	Fixed
15.7-16.2 GHz	Airport Surface Detection Equipment (ASDE)	Radiolocation
21.2-23.6 GHz	Low Density Microwave Link	Fixed


NW INDIANA RAILROADS
Lake and Porter County
Indiana Railroads and Abbreviations
AMTK Amtrak RR
BLRR Bee Line RR
CAPA City of Auburn Port Authority
CEIW Central Indiana & Western RR
CERA Central Railroad Company of Indianapolis RR
CFER Chicago, Ft. Wayne & Eastern RR
CIND Central Railroad Company of Indiana
CKIN Chesapeake & Indiana Railroad
CMPA City of Madison Port Authority RR
CN Canadian National RR
CNC C & NC RR
CSSB Chicago, Southshore, & South Bend RR
CSX CSX RR
DCR Dubois County RR
EJE Elgin, Joliet & Eastern Railroad
EVWR Evansville Western Railroad
EWR Elkhart & Western Railway
FCRR Fulton County Railroad
GDLK Grand Elk Railroad
GTW Grand Trunk Railroad
HCR HC Railroad
HHPA Hoosier Heritage Port Authority
HOS Hoosier Southern RR
IERR Indiana Eastern Railroad
IHBR Indiana Harbor Belt
IN Indiana Northeastern RR
INCR Indian Creek RR
INOH Indiana & Ohio RR
INRD Indiana Rail Road Company
IRRM Indiana Railroad Museum RR
ISRR Indiana Southern RR
ISW Indiana Southwestern Railway
KBS Kankakee, Beaverville, & Southern RR
KR Kokomo Rail
KTR Kendallville Terminal RR
LIRC Louisville & Indiana RR
LORL Lucas Rail Lines dba LNA&C
MGR MG Railroad
MSO Michigan Southern Railroad
NS Norfolk Southern RR
SIND Southern Indiana Railway
TPW Toledo, Peoria, & Western Railway
VVR Vermilion Valley Railroad
WC Wabash Central RR
WSR Winamac Southern RR
WVRR Whitewater Valley RR
Whiting
East Chicago
Hammond
Gary
Lake Station
Portage
Ogden Dunes
Dune Acres
Beverly Shores
Porter
Burns Harbor
Chesterton
LaPorte
Lake
Porter
New Chicago
Munster
Highland
Griffith
Hobart
Dyer
Schererville
Merrillville
St. John
Valparaiso
Westville
NS
CSX
CSSB
AMTK
EJE
IHBR
CN
CFER
STATE OF INDIANA
2014
RAIL SYSTEM MAP
NW Indiana
Lake and Porter County
DEPARTMENT OF TRANSPORTATION
Michael R. Pence, Governor
Karl B. Browning, Commissioner
2/25/2014
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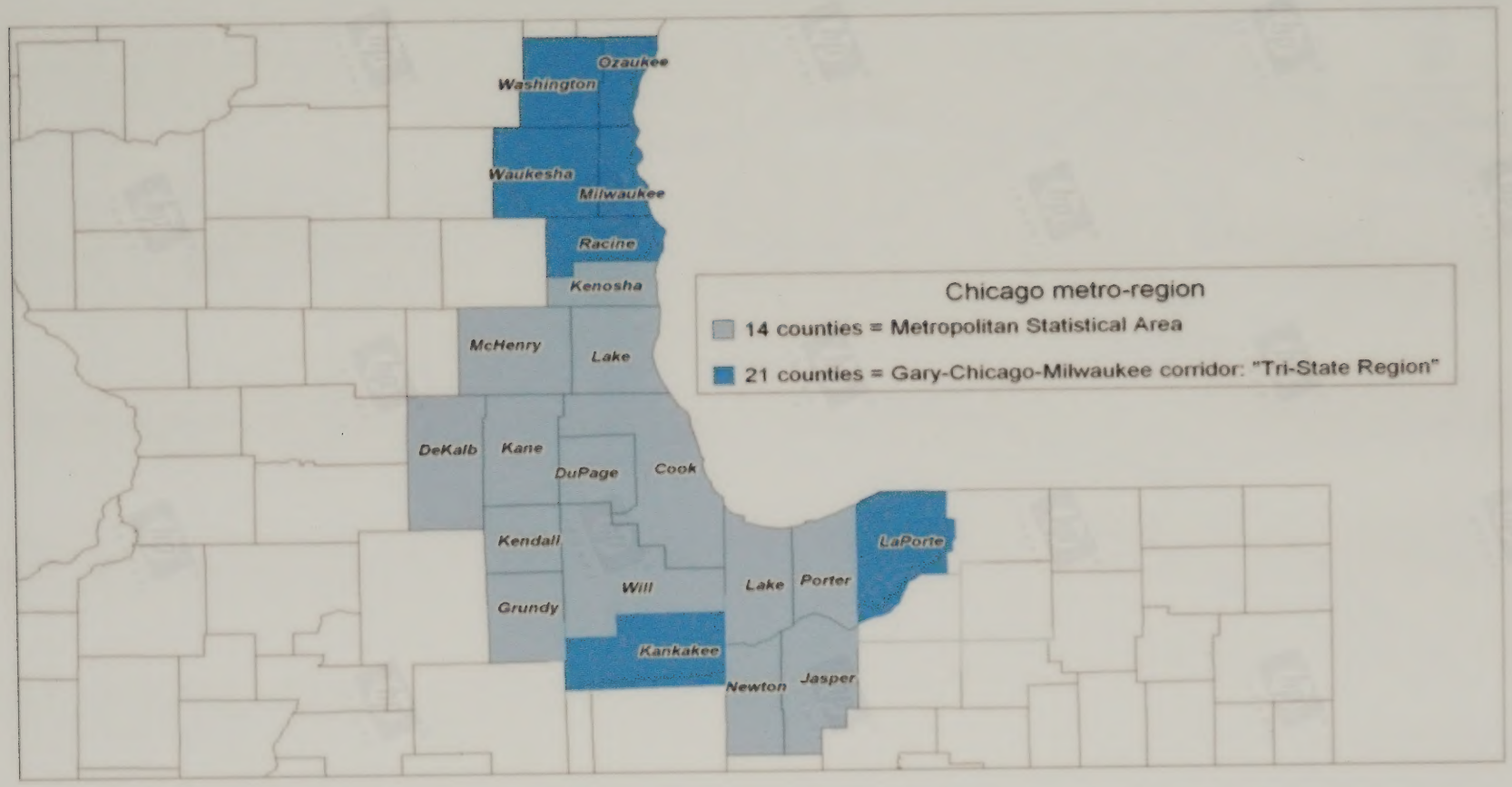
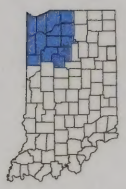
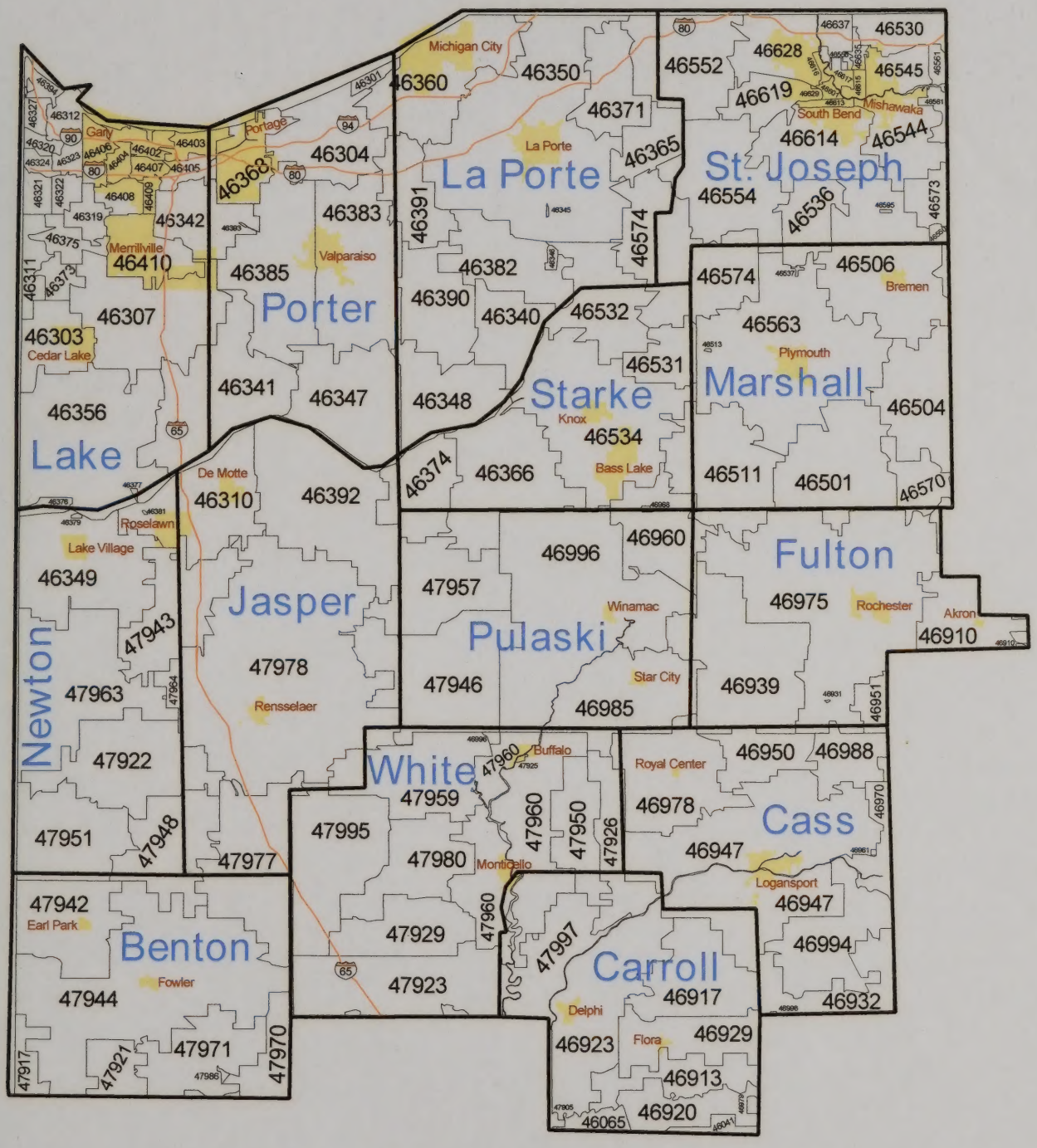

Ozaukee
Washington
Waukesha
Milwaukee
Racine
Kenosha
McHenry
Lake
DeKalb
Kane
DuPage
Cook
Kendall
Will
Grundy
Kankakee
Lake
Porter
LaPorte
Newton
Jasper
Chicago metro-region
14 counties = Metropolitan Statistical Area
21 counties = Gary-Chicago-Milwaukee corridor: "Tri-State Region"

Northwest Indiana ZIP Codes (ZCTAs) By County





ZIP Code Tabulation Areas (ZCTAs) are Census Bureau representations of ZIP codes

Source: Census 2000 Tiger files
Map produced by the Indiana Business Research Center, IU Kelley School of Business

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